

# Water Regulation, Land Use and the Environment<sup>1</sup>

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## I. INTRODUCTION

Water is an important element in planning for the use of land. But it is only *one* element. Problems arise in the planning process when water and non-economic uses of water are given a sacrosanct status that abjures private use for the benefit of “the public.” This is increasingly happening under flawed interpretations of the public trust doctrine.<sup>2</sup>

Many courts have forgotten that the *jus privatem* is as much a part of the public trust doctrine as the *jus publicum*. Certainly water should be available for future use, but it also should be readily available for current use. When the balance between current private and abstract or future public needs is distorted, water use and availability of water becomes the primary, or even sole, consideration in the process. This leads to the *preservation* of water for such uses as “minimum stream flows” and non-beneficial use by selected segments of the public and, ultimately, an elitist, communitarian regime that bears no relationship to either traditional notions of water rights or constitutionally protected rights in property.

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<sup>2</sup> See *In re Water Use Permit Applications (Waiahole)*, 94 Hawai‘i 97, 9 P.3d 409 (2000); *In re Water Use Permit Applications*, 105 Hawai‘i 1, 93 P.3d 643 (2004) (affirming in part, and vacating in part, the Water Commission’s decision after remand from *Waiahole*); *In re Water Use Permit Applications*, 113 Hawai‘i 52, 147 P.3d 836 (2006) (appeal after second remand to Water Commission).

Part II of this article discusses land use planning in Hawai'i and demonstrates where, under both governing law and common sense, water should fit in the planning process. Part III discusses the relationship between the State Water Code, the General Plan, and Oahu's Development Plan, in regard to water allocation for development. Parts IV and V analyze the skewed consequences which follow after the Hawai'i Supreme Court's decision in *In re Water Use Permit Applications (Waiahole)*<sup>3</sup> upset the balance between land use and water law set forth in statutes and common law. To demonstrate that the need for common sense water use planning is not unique to Hawai'i and to facilitate further discussion, Parts VI, VII, and VIII present the regulatory schemes in Arizona, Colorado, and New Mexico, respectively. Part IX ends where we began: with a warning that although water is an important consideration in planning for land use, it cannot become the only consideration.

## II. LAND USE PLANNING IN HAWAI'I

What follows are summaries of the sophisticated system of land use planning and controls in Hawai'i and the pertinent parts of the state Water Code, which sets out the importance and precedence of plans. This Part concludes by discussing the elements of the planning system that in theory govern land use—and thus water allocation—on Oahu.

### A. Hawai'i's Land Use Law<sup>4</sup>

It is axiomatic that zoning, at either the state or county level, governs the use and development of land. Zoning decisions are in turn made according to comprehensive plans, which create parameters and guidelines for zoning laws. As the New York Court of Appeals observed:

[T]he comprehensive plan is the essence of zoning. Without it, there can be no rational allocation of land use. It is the insurance that the public welfare is being served and that zoning does not become nothing more than just a Gallup poll.<sup>5</sup>

Charles Haar makes the same point in his seminal article linking land use law and planning:

The basic instrument of city planning is the "master plan." This master plan, a "comprehensive, long-term general plan" for the physical development of the community, embodies information, judgments, and objectives collected and formulated by experts to serve as both a guiding and predictive force. . . .

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<sup>3</sup> 94 Hawai'i 97 (2000).

<sup>4</sup> See generally DAVID L. CALLIES, PRESERVING PARADISE (1994).

<sup>5</sup> Udell v. Haas, 235 N.E.2d 897, 900-01 (N.Y. 1968).

The city master plan is a long-term general outline of projected development; zoning is but one of the many tools which may be used to implement the plan.<sup>6</sup>

So it is in Hawai'i. Hawai'i's cases, statutes and county charter provisions make it clear that the fundamental decisions regarding the use of land, for whatever purpose, should be preceded by a careful and deliberate planning process, the end result of which is a county land use plan. As a mainland commentator familiar with Hawai'i has observed, "[r]ecent years have seen the sudden emergence of a planning requirement as a necessary condition to the exercise of land controls . . . [T]he state policy plan does commit the state to a comprehensive planning policy as the basis for land management by state and county governments."<sup>7</sup>

Hawai'i's land use law consists of four principle parts: a state plan, a statewide zoning system, local general and development plans, and local zoning. Of particular importance are the state and county plans.<sup>8</sup> Hawai'i courts have often struck down any land use decision that "is inconsistent with the goal of long range comprehensive planning."<sup>9</sup>

### 1. The state plan

Act 100,<sup>10</sup> the state plan, summarizes Hawai'i's statewide planning system.<sup>11</sup> More specifically, the goals, objectives, and policies of the state plan provide broad guidelines for the state,<sup>12</sup> and "[t]he priority guidelines established in this chapter . . . provide guidelines for decision-making by the State and the counties for the immediate future *and set priorities for the allocation of resources*."<sup>13</sup> The plan explains that

[s]tate programs shall further define, implement *and be in conformance with* the overall theme, goals, objectives, and policies, and shall utilize as guidelines the priority guidelines contained within this chapter.<sup>14</sup>

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<sup>6</sup> Charles M. Haar, *In Accordance With a Comprehensive Plan*, 68 HARV. L. REV. 1154, 1154-56 (1955).

<sup>7</sup> Daniel R. Mandelker & Annette B. Kolis, *Whither Hawaii? Land Use Management in an Island State*, 1 U. HAW. L. REV. 48, 49, 51 (1979).

<sup>8</sup> "[T]he language of the Zoning Enabling Act clearly indicates the legislature's emphasis on comprehensive planning for reasoned and orderly land use development." *Kaiser Hawaii Kai Dev. Co. v. City & County of Honolulu*, 70 Haw. 480, 484, 777 P.2d 244, 246-47 (1989). See *infra*.

<sup>9</sup> *Kaiser Hawai'i Kai*, 70 Haw. at 484, 777 P.2d at 247.

<sup>10</sup> Act 100, § 2, 9th Leg., Reg. Sess. (1978), reprinted in 1978 Haw. Sess. Laws. 136-63.

<sup>11</sup> HAW. REV. STAT. § 226-52 (2001). See discussion *infra* Part II.B.

<sup>12</sup> HAW. REV. STAT. § 226-52(a)(1) (2001).

<sup>13</sup> *Id.* § 226-52(a)(2) (emphasis added).

<sup>14</sup> *Id.* § 226-52(a)(5) (emphasis added).

The state programs referred to in the plan include, but are not limited to, those involving coordination and review and those involving "regulatory powers."<sup>15</sup> Regulatory powers include, but are not limited to, "the land use and management programs administered by the land use commission and the board of land and natural resources."<sup>16</sup>

The Commission on Water Resource Management ("Water Commission" or "Commission"), which administers water as part of the Department of Land and Natural Resources, has a hand in regulation through its permitting process. Accordingly, the requirements of the state plan govern the Commission. Indeed, land use decision-making processes, including those carried out by the Water Commission, are particularly singled out for "conformance to the overall themes, goals, objectives, and policies" of the state plan. Even if those provisions did not apply to the Commission, there is a catch-all provision, that requires "[a]ll other regulatory and administrative decision-making processes of state agencies," including their rules, to conform to the state plan.<sup>17</sup> It is therefore clear that the Water Commission must conform to Act 100 and its themes, policies, goals, and objectives.

The state themes, policies, goals, and objectives of Act 100 provide mainly for economic development and agriculture. While the thematic and goals statements are general and often lack specific guidance,<sup>18</sup> the objectives and policies are by comparison very specific. There are eighteen such goals and objectives relating to economic development generally,<sup>19</sup> fourteen relating to agriculture,<sup>20</sup> and only a scant half-dozen relating to culture and the natural environment.<sup>21</sup>

The objective for water is particularly instructive: "Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities."<sup>22</sup> This objective demonstrates that conservation and preservation uses are inferior to the clearly economic needs listed in the statute. Under the state plan, water is for commercial use, not preservation.

Moving to the priority guidelines, there is a similar emphasis on economic development and agriculture. The state plan lists some thirty economic

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<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* §§ 226-52(b)(2)(D), (b)(2)(E).

<sup>18</sup> *See id.* §§ 226-3 to -4.

<sup>19</sup> *Id.* §§ 226-5 to -6.

<sup>20</sup> *Id.* § 226-7.

<sup>21</sup> *See id.* §§ 226-12 to -13.

<sup>22</sup> *Id.* § 226-16(a).

priority guidelines, including ten to promote the growth and development of diversified agriculture and aquaculture. These include:

- (1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.
- (2) Assist in providing adequate, reasonably priced water for agricultural activities.
- (3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.
- ....
- (7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.<sup>23</sup>

Through these objectives and priority guidelines, the Hawai'i Legislature has manifested a clear intent to promote and support the use of water for economically beneficial activities, especially agriculture.

## 2. The county plans

Regulating development is, in the main, a county function in Hawai'i.<sup>24</sup> The City and County of Honolulu, with jurisdiction over the island of Oahu, provides a good example of the relationship between the state plan and county land use decision-making. The county's principal method of regulating the use of land is the zoning ordinance, which is authorized by the Zoning Enabling Act.<sup>25</sup> On Oahu, that act is implemented through the Land Use Ordinance.<sup>26</sup> The Land Use Ordinance and the county's land use decision-making processes (including subdivision control and location of public facilities) are tied to the county development and general plans through the county charter. The Charter for the City and County of Honolulu requires conformity: "Public improvement projects and subdivision and zoning ordinances shall be consistent with the development plan for that area . . ."<sup>27</sup>

The present development plans for the Leeward<sup>28</sup> side of the island (Honolulu, Waikiki, Pearl Harbor, etc.) show much of land use in urban

<sup>23</sup> *Id.* § 226-103(d).

<sup>24</sup> See discussion *infra*.

<sup>25</sup> HAW. REV. STAT. § 46-4 (1993 & Supp. 2006).

<sup>26</sup> HONOLULU, HAW., REV. ORDINANCES ch. 21 (1990); see also CALLIES, *supra* note 4, at 24.

<sup>27</sup> HONOLULU, HAW., REV. CHARTER § 6-1511(3) (2000 & Supp. 2003).

<sup>28</sup> "Leeward" refers to the dry side of the island. MARY KAWENA PUKUI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 473 (rev. ed. 1986) (describing "leeward," or "lalo," as referring to the "lee," or "sheltered," side of the island).

development and agricultural uses.<sup>29</sup> The present development plans for the rural Windward<sup>30</sup> side, on the other hand, show most of land use in conservation and agricultural uses, with only small pockets of urban development of the sort which has high priority under the state Water Code.<sup>31</sup> In addition, the General Plan for Oahu, to which the development plans and local land use controls must conform, similarly provides for development principally on the Leeward side, and not the Windward side, of Oahu.<sup>32</sup>

*B. Hawai'i Caselaw Requires Planning to Precede Land Use  
Decision-Making at Every Level*

Hawai'i courts have consistently held that planning is a required precedent to zoning, to which all zoning and other land use controls must conform. Perhaps the strongest statement of the priority of planning comes from the Hawai'i Supreme Court's decision in *Kaiser Hawaii Kai Development Co. v. City & County of Honolulu*.<sup>33</sup>

The issue in *Kaiser Hawaii Kai* arose when Kaiser Hawaii Kai Development Company ("Kaiser") began to develop a residential housing project on a parcel of land located in east Honolulu.<sup>34</sup> The proposed development was an allowed use of the parcel, which had been zoned for residential purposes since 1954.<sup>35</sup> Kaiser applied for and received the requisite special area management use permit.<sup>36</sup>

A group opposed to the development spearheaded an initiative to downzone the property from residential to preservation.<sup>37</sup> When the initiative was placed on the ballot, Kaiser sued for injunctive relief.<sup>38</sup> The circuit court agreed with Kaiser and enjoined the initiative.<sup>39</sup> The supreme court stayed the injunction and allowed the initiative to go forward.<sup>40</sup> The measure was approved at the general election.<sup>41</sup>

<sup>29</sup> See *infra* Part III.C-D.

<sup>30</sup> "Windward" refers to the wet side of the island. PUKUI & ELBERT, *supra* note 28, at 561 (explaining that "windward," or "ao'ao makani," refers to the exposed side of the island).

<sup>31</sup> See HAW. REV. STAT. § 174C-2 (1993 & Supp. 2006); *infra* Part III.C-D.

<sup>32</sup> CITY AND COUNTY OF HONOLULU DEP'T. OF GEN. PLANNING, GENERAL PLAN OBJECTIVES AND POLICIES (1992); see *infra* Part III.C-D.

<sup>33</sup> 70 Haw. 480, 777 P.2d 244 (1989).

<sup>34</sup> *Id.* at 481-82, 777 P.2d at 245.

<sup>35</sup> *Id.* at 481, 777 P.2d at 245.

<sup>36</sup> *Id.* at 482, 777 P.2d at 246.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 483, 777 P.2d at 246.

On review following the election, the supreme court overturned the initiative. The court began its analysis by examining the Zoning Enabling Act, codified as section 46-4(a) of the Hawai'i Revised Statutes ("HRS"), from which the counties "derive their zoning powers."<sup>42</sup> According to the court, section 46-4 expresses the legislature's intent that "[z]oning in all counties shall be accomplished within the framework of a long range, comprehensive general plan prepared . . . to guide the overall future development of the county."<sup>43</sup> Summarizing the planning structure, the court observed that the legislature had reaffirmed

its aim of having *long range comprehensive land use planning by the state and counties* . . . by enact[ing] the State General Plan, [HRS] chapter 226, in 1978. County general plans under chapter 226 are defined as comprehensive long-range plans. Those county general plans and the more detailed development plans are to be

(1) formulated with input from the state and county agencies as well as the general public, (2) take into consideration the state functional plans, and (3) be formulated on the basis of sound rationale, data, analyses, and input from the state and county agencies and the general public.<sup>44</sup>

Turning to the initiative, the court recognized that the measure presented a "piecemeal" attack on an established zoning classification, which, if allowed, would "conflict with the general scheme" established by HRS section 46-4 for "fixing the uses of property in designated areas" pursuant to comprehensive plans.<sup>45</sup> The court refused to carve such an exception into section 46-4. Because section 46-4 involved a matter of statewide concern, the court determined that the statute was superior to the initiative provision of the city charter.<sup>46</sup> Accordingly, the court invalidated the initiative and vote as contrary to the Zoning Enabling Act.

The opinion in *Kaiser Hawaii Kai* was not the first to place such emphasis on planning preceding zoning. In fact, *Kaiser Hawaii Kai* referred repeatedly to an earlier decision, *Lum Yip Kee v. City & County of Honolulu*,<sup>47</sup> in which the court set out in detail and with approval the content and process by which Honolulu in 1973 adopted eight development plans to guide the use of land on

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<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at 486-87, 777 P.2d at 248 (citing *Lum Yip Kee Ltd. v. City & County of Honolulu*, 70 Haw. 179, 186, 767 P.2d 815, 820 (1989)) (emphasis added) (citations omitted).

<sup>45</sup> See *id.* at 484, 777 P.2d at 247 (quoting *Township of Sparta v. Spillane*, 312 A.2d 154, 157 (N.J. Super. Ct. App. Div. 1973) and *Leonard v. City of Bothell*, 557 P.2d 1306, 1309-10 (Wash. 1976)).

<sup>46</sup> *Id.* at 489-90, 777 P.2d at 249-50.

<sup>47</sup> 70 Haw. 179, 767 P.2d 815 (1989).

Oahu, as required by the Charter of the City and County of Honolulu and the general plan. As the court observed:

While the *General Plan guides development* by expressing overall general goals to be sought in the planning process, the actual *physical development* of a site is controlled by the *development plan* for the area in which the site is located, and its zoning.<sup>48</sup>

After further enumerating in detail the elements of the development plans, the court held that

[t]he charter requires zoning ordinances to conform to and implement the development plan for that area. . . . In order to meet this conformance requirement, it is frequently necessary for a landowner first to seek a development plan amendment from the City before requesting a zoning change.<sup>49</sup>

In setting out the requirements for planning and its relationship to zoning, the court in *Lum Yip Kee* drew on the reasoning of the Intermediate Court of Appeals in *Protect Ala Wai Skyline v. Land Use & Controls Committee*.<sup>50</sup> There, in deciding that a major hotel development was consistent with the General Plan and Development Plan for Waikiki, the court explained that

[w]hile the General Plan guides development by expressing overall general goals to be sought in the planning process, see 1 McQuillin, *Municipal Corporations*, §1.72 (1971), the actual physical development of a site is controlled by the development plan for the area in which the site is located, see D.L. Callies, *Regulating Paradise, Land Use Controls in Hawaii*, chapter 3 (1984), and its zoning. McQuillin, *supra*, §§ 1.72, 1.75.<sup>51</sup>

### III. THE HAWAII STATE WATER CODE AND ITS REQUIRED FOUR-PART PLAN

The Hawai'i State Water Code ("Water Code," also referred to as HRS chapter 174C) and the four-part plan, which govern the actions of the Water Commission, both clearly favor the promotion and protection of land uses of an economic, developmental nature. It is not the function of the Commission under the Code to extensively plan the distribution of water in the State, but

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<sup>48</sup> *Id.* at 182, 767 P.2d at 817 (quoting *Protect Ala Wai Skyline v. Land Use & Controls Comm.*, 6 Haw. App. 540, 548, 735 P.2d 950, 955 (Haw. Ct. App. 1987), *overruled in part by* GATRI v. Blane, 88 Hawai'i 108, 962 P.2d 367 (1998)) (emphasis added).

<sup>49</sup> *Id.* at 183, 767 P.2d at 818 (citing D. CALLIES, *REGULATING PARADISE: LAND USE CONTROLS IN HAWAII* 27 (1984)).

<sup>50</sup> 6 Haw. App. 540, 735 P.2d 950 (Haw. Ct. App. 1987), *overruled in part by* GATRI v. Blane, 88 Hawai'i 108, 962 P.2d 367 (1998).

<sup>51</sup> *Id.* at 548, 735 P.2d at 955.



rather to perform specific duties, which are governed by the network of state and local plans, zoning regulations and ordinances, the language of the Water Code, and the Hawai'i Water Plan called for by the Water Code.

*A. The Water Code Clearly Contemplates Maximum Beneficial Uses of a Commercial and Developmental Nature Before Protection of the Environment and Traditional and Customary Native Hawaiian Rights*

The State Water Code<sup>52</sup> was created to implement article XI, section 7 of the Hawai'i Constitution.<sup>53</sup> The Water Commission was established within the Department of Land and Natural Resources ("DLNR") to administer the Water Code. "The Commission has broad powers and exclusive jurisdiction and final authority in all matters regarding the administration of the water code."<sup>54</sup>

The Commission is responsible for the drafting of the Water Resource Protection Plan ("WRPP"), which makes up a major part of the Hawai'i Water Plan, the elements of which are set forth in HRS section 174C-31. Among the responsibilities of the Commission with regard to the water plan are the following: "[S]tudy and inventory the existing water resources of the State and the means and methods of conserving and augmenting such water resources: *review existing and contemplated needs and uses of water . . . study the quantity and quality of water needed for existing and contemplated uses . . .*"<sup>55</sup>

The emphasis of the Code is clear from its initial declaration of policy. "The state water code *shall be* liberally interpreted to obtain *maximum beneficial use* of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses."<sup>56</sup>

Only after setting out these specific "maximum beneficial use" areas does the section continue, requiring "adequate provision for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation."<sup>57</sup>

<sup>52</sup> HAW. REV. STAT. §§ 174C-1 to -101 (1993 & Supp. 2006).

<sup>53</sup> HAW. CONST. art. XI, § 7.

<sup>54</sup> COMMISSION ON WATER RES. MGMT., DLNR, WATER RESOURCES PROTECTION PLAN, at II-1 (undated).

<sup>55</sup> *Id.* (emphasis added).

<sup>56</sup> HAW. REV. STAT. § 174C-2(c) (1993 & Supp. 2006) (emphasis added). The importance of this particular section of the Water Code is underscored by the frequency with which other sections of the Code refer to it.

<sup>57</sup> *Id.*

*B. The Water Code Directs the Implementation of These Water Resource Policies Through the Four-Part Hawaiian Water Plan, Which the Code Requires to Be Consistent With County Planning and Zoning*

The Water Code directs that “[n]othing in this chapter to the contrary shall restrict the planning or zoning power of any county under chapter 46 [the county Zoning Enabling Act].”<sup>58</sup> The Water Code also lists “[t]he implementation of the water resources policies expressed in section 174C-2” as one of the five objectives of the Hawai'i Water Plan.<sup>59</sup> Two of the four elements of the Hawai'i Water Plan are specifically directed to be consistent with county zoning and plans: “Each water use and development plan and the state water projects plan shall be consistent with the respective county land use plans and policies including general plan and zoning as determined by each respective county.”<sup>60</sup> Moreover, the county water plans must also be consistent with the state policies and land use classifications.<sup>61</sup> Presumably, this means that county water plans must also conform to the land use classifications of the state Land Use Commission promulgated under HRS Chapter 205 (the Land Use Law) and the policies set out in the state plan, Act 100.

That the county planning and zoning takes precedence over the part of the Hawai'i Water Plan that covers use and development at the county level is clear from that part of the Code which directs that “[e]ach county shall update and modify its water use and development plans as necessary to maintain consistency *with its zoning and land use policies*.”<sup>62</sup> In other words, it is the county water use and development plan that must conform to county zoning and land use policies, and not the modification of zoning and land use policies to conform to the county water use and development plan. Once again, water allocation is secondary to overall land use planning and implementation through zoning at the county level.

*C. Honolulu's General and Development Plans Provide for Development of Central Oahu and Ewa in Leeward Oahu*

Even a cursory review of the General and Development Plans for the City and County of Honolulu in existence at the time of the Water Commission's hearings on Oahu water allocation demonstrates the County's intent that major

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<sup>58</sup> *Id.* § 174C-4(a).

<sup>59</sup> *Id.* § 174C-31(g)(5).

<sup>60</sup> *Id.* § 174C-31(b)(2).

<sup>61</sup> *Id.* § 174C-31(b)(3).

<sup>62</sup> *Id.* § 174C-31 (emphasis added).

development and the accompanying need for water occur in Ewa and other parts of Leeward Oahu and not Windward Oahu.

*1. The Oahu general plan directs development to Ewa and Oahu's primary urban center*

The second policy under the population distribution objective of the Oahu General Plan states that it is the policy of the County to "[e]ncourage development within the secondary urban center at Kapolei and the Ewa and Central Oahu urban-fringe areas to relieve developmental pressures in the remaining urban-fringe and rural areas and to meet housing needs not readily provided in the primary urban center."<sup>63</sup>

The following table,<sup>64</sup> showing distribution of residential population for the period from 1990 to 2010, projected a population increase in the Primary Urban Center ("PUC") from 18,777 to 65,777 residents, and a population increase in the secondary urban center (Ewa-Makakilo) from 76,917 to 89,917 residents, for a total increase of approximately 100,000 people in the urban centers on Oahu alone.<sup>65</sup> But projections for the same time frame for "rural" areas (Koolaupoko, Koolauloa, North Shore, and Waianae Coast) contemplate a comparatively miniscule population growth.<sup>66</sup>

Table 1:

Location	1990 Population	1990 % of Total	2010 Estimated Population	2010 Estimated % of Total
Primary Urban Center	432,023	51.6	450,800 - 497,800	45.1 - 49.8
Ewa	42,983	5.1	119,900 - 132,900	12.0 - 13.3
Central Oahu	130,474	15.6	148,900 - 164,900	14.9 - 16.5
East Honolulu	45,654	5.5	53,000 - 58,000	5.3 - 5.8
Koolaupoko	117,694	14.1	109,900 - 121,900	11.0 - 12.2
Koolauloa	14,263	1.7	13,000 - 14,000	1.3 - 1.4
North Shore	15,729	1.9	16,000 - 18,000	1.6 - 1.8
Waianae	37,411	4.5	38,000 - 42,000	3.8 - 4.2
OAHU TOTAL	836,231	100.0	949,500 - 1,049,500	95.0 - 105.0

It is consistent with these policies and projections that the physical development objectives in the General Plan also provide first and foremost for Ewa and the PUC, rather than the rural North Shore:

<sup>63</sup> CITY AND COUNTY OF HONOLULU DEP'T OF GEN. PLANNING, *supra* note 32, at 15.

<sup>64</sup> *Id.* at 47 (supplying data reproduced in Table 1).

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

### Objective A

To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.

### Policy 1

Plan for the construction of new public facilities and utilities in the various parts of the island according to the following order of priority: *first*, in the primary urban center; *second*, in the secondary urban center in Kapolei; and *third*, in the urban-fringe and *rural areas [north shore/Windward]*. . . .

### Objective B

To develop Honolulu (Waialae-Kahala to Halawa), Aiea, and Pearl City as the island's primary urban center . . . .

### Objective C

To develop a secondary urban center in Ewa with its nucleus in the Kapolei area

. . . .

### Policy 2

Encourage the development of a major residential, commercial, and employment center within the secondary urban center at Kapolei.<sup>67</sup>

As demonstrated above, the general plan clearly provides for development on Leeward Oahu and not on Windward Oahu.

## 2. *The applicable development plans also provide for population increase and development on the Leeward side of Oahu*

Both the county development plans adopted by ordinance at the time of the Water Commission's water allocation hearings and the current, revised plans for Oahu, Koolauloa, and Koolaupoko (comprising virtually all of the North Shore) demonstrate the county's intent that land use and development patterns remain relatively stable and rural. For example, the 1983 Koolaupoko plan determined to manage physical growth and development in the urban-fringe and rural areas so that: "(1) *[a]n undesirable spreading of development is prevented*, and (2) *[t]heir proportion of the islandwide resident population remains unchanged*."<sup>68</sup>

The general plan population distribution guidelines for Koolaupoko provide for a population range of 12.4% to 13.6% of the island wide total.<sup>69</sup> The 2000 Koolaupoko Sustainable Communities Plan explained that

*[b]etween 1995 and 2020, Koolaupoko is projected to experience minimal population growth.* According to projections prepared in 1995 by the Planning

<sup>67</sup> *Id.* at 32-34 (emphasis added).

<sup>68</sup> HONOLULU, HAW., REV. ORDINANCES No. 83-8 (1983), as amended by Ordinances Nos. 84-60 (1984) and 85-49 (1985), Article 6 (emphasis added).

<sup>69</sup> *Id.* (emphasis added).

Department, Koolaupoko's population might be expected to increase from about 117,700 in 1995 to approximately 122,100 by 2020, or by less than one half of one percent per year. Population growth of this magnitude is not expected to generate significant demand for additional residential or commercial development in the region.

The preservation, continuation and potential expansion of agricultural land use is important to Koolaupoko's future as a means to provide jobs and economic activity; offers the choice of a rural lifestyle proximate to a major metropolitan area; and maintains open space and a rural ambience in a section of the island that is famed for its natural beauty.<sup>70</sup>

The foregoing development plan contemplates *no* development on the Windward side. The contrasting intention for the Leeward, Ewa, Central Oahu, and PUC planning districts could not be more stark. For example, the 1983 Ewa Development Plan contained the following description:

The Ewa area's population of 5,585 in 1980 constituted 4.7 percent of the island's total population. Relevant general plan policies for Ewa *encourage the gradual development of a secondary urban center in order to relieve development pressures in the urban-fringe and rural areas.*

It is the intent of the Ewa Development Plan to provide a guide for orderly and coordinated public and private development in a manner that is consistent with general plan provisions.

*A new secondary urban center shall be gradually developed in the West Beach-Makakilo area in order to accommodate most of the expected influx of population into the area between 1980 and the year 2000.*<sup>71</sup>

The 1997 Ewa Development Plan provided that

[b]y 2020, the Ewa Development Plan Area . . . *will have experienced tremendous growth*, and will have made significant progress toward providing a Secondary Urban Center for Oahu. Population will have grown from 43,000 people in 1990 to almost 125,000. Nearly 28,000 new housing units will have been built in a series of master planned communities.

Job growth will be equally impressive, rising from 17,000 jobs to over 64,000 in 2020. Oahu residents and visitors will be attracted to Ewa by a new university campus, the Ko Olina resort, ocean and waterfront activities at Ewa Marina, a major super regional park, and a thriving City of Kapolei which has retail and commercial establishments and private and government offices.<sup>72</sup>

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<sup>70</sup> PLANNING DEP'T, CITY AND COUNTY OF HONOLULU, KOOLAUPOKO SUSTAINABLE COMMUNITIES PLAN, ch. 2, at 2-1, 2-6 (2000), available at <http://honoluluapp.org/planning/koolaupoko/KP2.pdf> (emphasis added).

<sup>71</sup> HONOLULU, HAW., REV. ORDINANCES No. 81-80 (1981), as amended by Ordinances Nos. 83-26 (1983), 84-57 (1984) and 85-61 (1985), Article 3 (emphasis added).

<sup>72</sup> PLANNING DEP'T, CITY AND COUNTY OF HONOLULU, EWA DEVELOPMENT PLAN, ch. 2, at 2 (rev. ed. 2000) (emphasis added), available at <http://honoluluapp.org/planning/Ewa/Ewa2.pdf>.

The Ewa Development Plan revision also provided for water allocation: "*Use of Waiahole Ditch Water*. Waiahole Ditch Water is needed for diversified agricultural purposes in Central Oahu and Ewa and for recharge of the Pearl Harbor Aquifer. Water pumped from the Pearl Harbor aquifer is needed to serve the existing and future development of the region."<sup>73</sup>

In sum, the development plans call for minimal growth on the Windward side and North Shore of Oahu, contrasted with spectacular growth on the Leeward side of the island. These development plans conform to Oahu's General Plan, as required by law. Decisions regarding water resources must, in turn, reflect the policies, goals, and projections of these various plans.

### 3. 1983 Central Oahu development plan

In Central Oahu, the existing development plans provide for both urban use expansion and major agricultural uses of land. For central Oahu,

*[t]he dominant land use . . . is agriculture, followed by military activities at Wheeler Air Force Base, Schofield Barracks, and the Naval Reservation on Waipio Peninsula. Although increased development of lands for residential use is projected for the area, especially in Waipahu, Waipio, and Mililani, the major contribution Central Oahu makes toward sustaining the State's agricultural industry dictates that the present level of agricultural activity in the district be substantially maintained. This is supported by the general plan policy that identifies Ewa, the North Shore, and Central Oahu as areas for the provision of sufficient agricultural lands "to encourage the continuation of sugar and pineapple as viable industries."*<sup>74</sup>

Compare the foregoing with the 2003 Central Oahu *Sustainable Communities Plan*, which provides that

*[b]y 2025, the Central Oahu Sustainable Communities Plan Area . . . is expected to experience moderate growth as existing areas zoned for residential development are built out. Population will have grown from almost 149,000 people in 2000 to over 173,000 in 2025. Over 11,000 new housing units will have been built since 2000 in master-planned communities.*

Significant job growth is also expected, rising from almost 39,000 jobs in 2000 to over 65,000 in 2025 (almost 10% of Oahu total projected). The bulk of the private non-construction job growth is projected to be in services, retail, or transportation/communications/utilities (70%) with another 20% in industrial occupations.<sup>75</sup>

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<sup>73</sup> HONOLULU, HAW., REV. ORDINANCES § 24-36.88 (1997).

<sup>74</sup> HONOLULU, HAW., REV. ORDINANCES NO. 83-7 (1983), as amended by Ordinances Nos. 84-59 (1984) and 85-48 (1985), Article 5 (emphasis added).

<sup>75</sup> HONOLULU, HAW., REV. ORDINANCES § 24-48.17, reprinted in DEP'T OF PLANNING AND PERMITTING, CENTRAL OAHU DEVELOPMENT & SUSTAINABLE COMMUNITIES PLANS, pt. 2, 1 (2003), available at <http://www.honolulu.gov/refs/roh/central/coch2.htm>.

The Central Oahu Development Plan revision also proposed additional residential development, the promotion of diversified agriculture, and new employment opportunities in Central Oahu.

Hand in hand with this increased future growth is the need for water, primarily Waiahole Ditch water. These new development plans for Oahu, mandated by the referendum on the Honolulu Charter Revision Recommendations of the Charter Revision Commission, recognized the need for Waiahole Ditch water to serve the needs stated in this and the aforementioned county plans:

#### 7.1.4 Irrigation and Aquifer Recharge Needs:

*Water transported by Waiahole Ditch from water sources on the Windward side to the Leeward side of the Koolau ridge will be needed to irrigate agricultural lands in the region and for recharge of the Pearl Harbor aquifer which supports the existing and future population in the region.*

Water needs for irrigation will continue despite the closing of Oahu Sugar Company in 1995. The State Department of Agriculture has identified approximately 13,000 acres of agricultural zoned land and 1,300 acres of golf courses that would be serviced by Waiahole Ditch water and water pumped in Central Oahu. Large landowners in the area are pursuing diversified agricultural opportunities to replace sugar. The State Department of Land and Natural Resources is also proposing the temporary leasing to farmers of 1,300 acres in Kapolei on land previously used by sugar. The Waiahole water provides the only opportunity for economical irrigation water for new farmers. Where urban development replaces sugar, irrigation water will be needed for landscaping and the new golf courses being developed.

According to BWS [(the Board of Water Supply)], the proposed growth policy for the region will require an additional 30 mgd [(million gallons per day)] of water for the additional 137,000 people expected in the region by the year 2020. Water from the Pearl Harbor aquifer which supplies more than half of the Primary Urban Center's demand of 45 mgd will also be needed to support this urban growth.

An estimated 20-25 percent of the Waiahole Ditch water from drip irrigation of sugar also served to recharge the Pearl Harbor aquifer. The return of Waiahole Ditch water to Windward Oahu would reduce the sustainable yield of the Pearl Harbor aquifer due to the loss of this recharge. . . .

*Waiahole Ditch water will be needed on the Leeward side for direct support of agricultural uses and indirect support, through aquifer recharge of urban land uses. The water will sustain the emerging diversified agriculture industry in the area and the existing and future master planned communities intended to accommodate much of the growth of Oahu.<sup>76</sup>*

In sum, both the superseded and current development plans for Oahu clearly direct growth to the Leeward side and away from the Windward side.

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<sup>76</sup> EWA DEVELOPMENT PLAN REPORT 7-3 to -4 (1995) (emphasis added).

*D. The Oahu Water Plan Also Provides for Water-Intensive Use and Development of Land Primarily on the Leeward Side of Oahu*

The Oahu Water Management Plan, as adopted by the Honolulu City Council in 1990, "sets forth the policies for water use and development within each development plan area. These are established in recognition of the vital role of water in supporting land use activities on the island of Oahu."<sup>77</sup> Its first policy declaration mandates that

[f]acilities for the provision of water shall be based on the General Plan population projections and the land use policies contained in the Development Plans as depicted on the Development Plan Land Use Maps.<sup>78</sup>

The Board of Water Supply's most recent draft update to the Oahu Water Management Plan demonstrates that population and demand for water will increase rapidly on the Leeward, and not the Windward, side of Oahu, as illustrated in Table 2.<sup>79</sup>

Table 2:

	PUC	Ewa	North Shore	Koolau-poko	Koolau-loa
2000 Population (1000s)	419.4	68.7	18.4	117.9	14.5
2000 Water Demand (mgd)	76.45	15.3	2.82	19.84	1.48
2030 Projected Population (1000s)	489.4	184.6	19.9	115.4	16.7
2030 Projected Water Demand (mgd)	90.04	42.5	3.35	19.62	2.05

The foregoing projections show that, while the demand for water in Ewa and the PUC is projected to increase by over forty million gallons per day ("mgd")—as a result of a projected population increase of 186,000—the needs of the *entire* Windward side are projected to increase by less than one mgd, driven by a projected population increase of *only* 1,200.

#### IV. PRESERVATION TRUMPS ALL: THE MESSAGE FROM THE HAWAII SUPREME COURT

As the preceding sections demonstrate, Hawai'i has a comprehensive land use planning scheme, which includes a detailed analysis of projected future

<sup>77</sup> HONOLULU, HAW., REV. ORDINANCES No. 90-62 art. II, § 2.2 (Jul. 25, 1990), *reprinted in* DEP'T OF GEN. PLANNING, CITY & COUNTY OF HONOLULU, OAHU WATER MANAGEMENT PLAN x (1990), *available at* <http://www.hawaii.gov/dlnr/cwrmp/planning/plans/wudpoa1990.pdf>.

<sup>78</sup> *Id.*

<sup>79</sup> *Id.* (supplying data reproduced in Table 2).



growth and allocation of water resources. Part IV discusses the mischief that occurs when exhaustive planning and conservation for future needs give way to contrived preservationism and allocations to favored uses that are unsupported by statute.

### A. The Common Law Background

As the Hawai'i Territorial Court understood it, common law gave an overlying owner the right to pump

all of the water that naturally flows from the well or that can be drawn therefrom by any pump, however powerful, and . . . he [may] use the water as he pleases and may conduct it to supply lands and communities at any distance from his own piece or parcel of land and may even waste it.<sup>80</sup>

This "absolute ownership" rule finds support in early Hawai'i case law.<sup>81</sup>

In the 1929 case of *City Mill Co. v. Honolulu Sewer & Water Commission*,<sup>82</sup> the court abandoned the absolute ownership rule as applied to "artesian waters which are known to flow freely and rapidly through broken rock or other materials permitting of easy passage" in favor of "correlative rights."<sup>83</sup> Under the latter system, a landowner may use as much groundwater as needed for the benefit of the overlying property, provided that he does not interfere with the relative rights of other surface owners.<sup>84</sup> Landowners become, in effect, owners of the right to use coequally the underlying water:

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<sup>80</sup> *City Mill Co. v. Honolulu Sewer & Water Comm'n*, 30 Haw. 912, 922 (1929), *overruled by In re Water Use Permit Applications (Waiahole)*, 94 Hawai'i 97, 9 P.3d 409 (2000); *see also* *Wright v. Goleta*, 219 Cal. Rptr. 740, 746 (Cal. Ct. App. 1985).

<sup>81</sup> *See* *Leong v. Irwin*, 10 Haw. 265, 270 (1896); *Davis v. Afong*, 5 Haw. 216, 222-24 (1884), *overruled in part by Waiahole*, 94 Hawai'i 97, 9 P.3d 409.

<sup>82</sup> *City Mill*, 30 Haw. 912.

<sup>83</sup> *Id.* at 924, 934. The court left open the possibility that the absolute ownership rule applied to waters "merely oozing or seeping through the soil." *Id.* at 924.

<sup>84</sup> *Id.* at 923-28; *accord* *Sorensen v. Lower Niobrara Nat'l Res.*, 376 N.W.2d 539, 546 (Neb. 1985).

[T]he owner of land is entitled to appropriate subterranean waters found under his land, but he cannot extract and appropriate them in excess of a reasonable and beneficial use upon the land which he owns, especially if such use is injurious to others who have substantial rights to the waters, and if the natural underground supply is insufficient for all owners, each is entitled to a reasonable proportion of the whole . . . .

*Sorensen*, 376 N.W.2d at 546 (quoting *Olson v. City of Wahoo*, 248 N.W. 304, 308 (Neb. 1933)). *See also* *State v. Michels Pipeline Const., Inc.*, 217 N.W.2d 339, 349 (Wis. 1974) ("Under the rule of correlative rights, the rights of all landowners over a common basin, saturated strata, or underground reservoir are coequal or correlative, and one cannot extract more than his share of the water, even for use on his own land, where others' rights are injured thereby.") (citations omitted).

If a person or other entity should purchase all of a large tract of land under which an artesian basin exists, it would be easy to take the view . . . that that owner of the land would be the sole owner of the water underneath it. If two persons or other entities should purchase each a half of that tract it would seem to be equally fair and rational to regard the two owners of the land as owners in equal shares of all of the waters. Why not, upon the same reasoning, regard all the owners of all the many portions of such an area as co-owners of the waters of the basin? We think that they should be so regarded and that this is the view that most nearly effectuates justice and coincides with early concepts of the law as to the ownership of the soil and all within it. Their rights are correlative.<sup>85</sup>

Correlative rights, like other property rights, are protected by the Constitution.<sup>86</sup>

The opinion in *City Mill* and the doctrine of correlative rights remained the cornerstone of Hawai'i groundwater law for over seventy years. That changed in August 2000, when the Hawai'i Supreme Court issued its opinion in *In re Water Use Permit Applications*,<sup>87</sup> commonly known as *Waiahole*.

### B. The Water Commission Decision

The *Waiahole* case arose out of disagreement between Windward and Leeward parties about how water originating in the Koolau mountains on the Windward side of Oahu should be used. The Waiahole Ditch System, located on the Island of Oahu, develops surface and groundwater from the Windward

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<sup>85</sup> *City Mill*, 30 Haw. at 924-25.

<sup>86</sup> In *City Mill*, the Honolulu City Sewer and Water Commission ("CSWC") rejected City Mill's application for a permit to tap a common underlying artesian basin. The CSWC denied the application because it "believed that from the artesian basin which the proposed well would tap more water is already being drawn by existing artesian wells than is filtering into the basin by natural processes." *Id.* at 921. City Mill challenged the denial as an unconstitutional taking of property. *Id.* at 947. The court phrased the issue as "whether [the Territory] may, without compensation to the applicants, prohibit the boring of any new well while at the same time leaving all users of existing wells at liberty to draw water therefrom." *Id.* at 922. The court reasoned that the government may not so restrict property rights and held that the statute allowing the CSWC "to wholly deprive any co-owner of the waters of the basin under consideration, without due compensation, of his right to share in the artesian waters of that basin, violate[d] the provision of the Constitution and [was] invalid." *Id.* at 947. The remedy for any threat to the water supply, the court concluded, was instead

by a lessening of the use already being had and not by wholly preventing the appellant from having his reasonable share of the water. . . . [I]t would be abhorrent to a sense of justice and violative of the appellant's rights as a co-owner of the waters in the artesian basin to prevent him from using any of the waters of that basin while at the same time to permit an unrestrained use of the same waters by others of his co-owners.

*Id.* at 946-47.

<sup>87</sup> 94 Hawai'i 97, 9 P.3d 409 (2000).

mountains and transfers it to the central plains at a rate of twenty-seven mgd.<sup>88</sup> The system was designed in 1916 and used by Oahu Sugar Company, an island sugar plantation, until 1993 when the plantation announced that it would soon cease operations.

Following the announcement, a collection of surface owners, Leeward farmers, Windward community associations and other interested parties applied to the Commission for various allocation permits to capture the water beneath their property, to reserve and withdraw water from the ditch, or to release the water into Windward streams.<sup>89</sup>

The Commission consolidated the applications of twenty-five parties into a single contested case hearing. The hearing began on November 9, 1995 and closed ten months later on September 20, 1996.<sup>90</sup> The Commission heard testimony from 161 witnesses and admitted 567 exhibits.<sup>91</sup> Deliberations lasted for fourteen months, and the Commission issued its final 250-page decision on December 24, 1997, more than four years after the first applications were submitted.<sup>92</sup>

The Commission's decision rested on 1109 findings of fact and two key legal conclusions. First, the Commission determined that the "State's *first duty* is to protect fresh water resources (surface and ground) which are part of the public trust *res*."<sup>93</sup> Second, the "duty to protect public water resources" was, according to the Commission, "a categorical imperative and the precondition to all subsequent considerations."<sup>94</sup> All water use decisions followed from these principles. From there, the Commission allocated water for uses it believed to be in the public interest, without regard to surface ownership.

The county plans and zoning to which the Commission is required to conform<sup>95</sup> notwithstanding, the Commission determined that stream restoration was of paramount importance, agricultural uses followed second, and nonagricultural—including land development—uses were considered only if sufficient water was otherwise available. Water flowing into the Waiahole

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<sup>88</sup> Susan Kreifels, *A State Commission Decision on Waiahole Ditch Will Divert Millions of Gallons*, HONOLULU STAR-BULL., <http://starbulletin.com/97/12/24/news/story1.html> (last visited Sept. 28, 2007).

<sup>89</sup> The five underground aquifers feeding the system were included in a designated water management area in 1992. *Waiahole*, 94 Hawai'i at 111, 9 P.3d at 424. A "[w]ater management area" means a geographic area which has been designated pursuant to [Hawai'i Revised Statute] section 174C-41 as requiring management of the ground or surface water resource, or both." HAW. REV. STAT. § 174C-3 (1993).

<sup>90</sup> *Waiahole*, 94 Hawai'i at 113, 9 P.3d at 425.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *Id.* at 113-14, 9 P.3d at 425-26 (emphasis added) (citation omitted).

<sup>94</sup> *Id.* (citation omitted).

<sup>95</sup> See discussion *supra* Part III.

Ditch from these aquifers and other sources was allocated in accordance with the Commission's protection imperative. Of the twenty-seven million mgd available, the Commission allocated only 14.03 mgd for productive use on Leeward Oahu.<sup>96</sup> The balance—nearly 13 mgd—was set aside for Windward streams.<sup>97</sup> As Rae Loui, deputy director of the Commission explained, “[i]n the immediate future more water will remain in Windward streams than will be diverted to the Leeward side.”<sup>98</sup> The bulk of that water flowing to the Windward side was reserved for preservation, with 2.10 mgd allocated for Kahana surface flow to offset losses within that ditch system, 1.58 mgd “reserved” for future Leeward agricultural expansion, and 5.39 mgd set aside as “unpermitted groundwater” to be allocated in the future.<sup>99</sup>

Aggrieved parties, representing both applicants for water use on the Leeward side and applicants seeking to release water into windward streams, appealed to the Hawai'i Supreme Court.

*C. Waiahole: The Trumping of Statutory and Common Law by the “Public Trust”*

In *Waiahole*, the Hawai'i Supreme Court affirmed in part and vacated in part the Commission's decision and remanded for further proceedings.<sup>100</sup> The court affirmed the Commission's construction of the public trust—extending it to surface and ground water without regard to navigability—but shied away from establishing preservation as the essential function of water use management. The court instead viewed the state's obligations under the public trust and section 174C as imposing a “dual mandate of protection and ‘conservation’-minded use, under which resource ‘protection,’ ‘maintenance,’ and ‘preservation [] enhancement’ receive special consideration or scrutiny, but not a categorical [imperative].”<sup>101</sup>

In addition, the court was critical of the evidence and methodology the Commission relied upon and vacated a number of water allocations. Accordingly, the court remanded for “additional findings and conclusions, with further hearings if necessary,” regarding: (1) “the designation of an interim instream flow standard for Windward streams”; (2) the interim flow standards for Waikane stream; (3) the actual need for water allocated to several applicants; and (4) other factual matters, including the availability of

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<sup>96</sup> See Kreifels, *supra* note 88.

<sup>97</sup> See *id.*

<sup>98</sup> See *id.*

<sup>99</sup> See *id.*

<sup>100</sup> *In re Water Use Permit Applications (Waiahole)*, 94 Hawai'i 97, 189-90, 9 P.3d 409, 501-02 (2000).

<sup>101</sup> *Id.* at 146, 9 P.3d at 458.

alternative water sources for certain applicants.<sup>102</sup> The court affirmed the balance of the Commission's decision.

While the effect of the allocation decisions on individual applicants may have little lasting impact in the state as a whole, the court's public trust discussion deserves careful review. The court began its foray into the public trust by acknowledging the "[s]ubstantial controversy" arising from the Commission's interpretation of the public trust.<sup>103</sup> Unmoved by the criticism,<sup>104</sup> the court endorsed the Commission's views in large part and held that the public trust doctrine applied to all "water resources" within the state, without regard to type or navigability.<sup>105</sup>

The court relied upon two distinct sources of law for support. First, the court noted that in 1978 the state had extended the public trust to underground water through two constitutional amendments, article XI, section 1 and article XI, section 7.<sup>106</sup> Section 1 provides that "for the benefit of present and future generations, the State and its political subdivisions shall protect and conserve . . . all natural resources, including . . . water."<sup>107</sup> Section 7 explains that "[t]he State has an obligation to protect, control, and regulate the use of Hawaii's water resources for the benefit of its people."<sup>108</sup> The court reasoned that the drafters (and apparently the voters) intended the term "water resources" to include not only navigable water within the public trust but also ground and non-navigable surface water.<sup>109</sup> Subterranean waters were thus brought within the purview of the public trust doctrine upon passage of the amendments.<sup>110</sup>

Second, the court determined that when land in Hawai'i passed from the kingdom to private owners, the kingdom reserved title to all water to itself.<sup>111</sup> Accordingly, groundwater rights did not pass with the transfer of ownership

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<sup>102</sup> *Id.* at 189-90, 9 P.3d at 501-02.

<sup>103</sup> *Id.* at 127, 9 P.3d at 439.

<sup>104</sup> *See, e.g., id.* at 130, 9 P.3d at 442.

<sup>105</sup> *See id.* at 128-35, 9 P.3d at 440-47.

<sup>106</sup> *Id.* at 131, 9 P.3d at 443.

<sup>107</sup> HAW. CONST. art. XI, § 1.

<sup>108</sup> *Id.* § 7. This amendment also required the legislature to establish a water resources agency to "protect ground and surface water." *Id.* The legislature passed what became HRS chapter 174C to fulfill the mandate of section 7.

<sup>109</sup> *Waiahole*, 94 Hawai'i at 133, 9 P.3d at 445.

<sup>110</sup> *See id.* The court relied upon a single statement from a delegate to the 1978 constitutional convention to support this conclusion. *See id.*

<sup>111</sup> *Id.* at 129, 9 P.3d at 441. The court relied on *Robinson v. Ariyoshi*, 65 Haw. 641, 658 P.2d 287 (1982), which held that when land passed from the Kingdom of Hawai'i to private owners, the Kingdom reserved for itself title to all waters. *Id.* at 674-75, 658 P.2d at 310. The *Waiahole* court referred to this as the "sovereign reservation." 94 Hawai'i at 133, 9 P.3d at 445.

of the overlying land; they remained with the kingdom and now rested with the state as its successor in interest.<sup>112</sup> For those reasons, and

given the vital importance of all waters to the public welfare, [the court] decline[d] to carve out a groundwater exception to the water resources trust. Based on the plain language of [Hawai'i's] constitution and a reasoned modern view of the sovereign reservation . . . the *public trust doctrine applies to all water resources, unlimited by any surface-ground distinction*.<sup>113</sup>

Having defined the *res* of the public trust, the court extended the purposes of the public trust beyond navigation and commerce<sup>114</sup> and held that the public trust required not only the preservation of water as an end in itself,<sup>115</sup> but also "encompasse[d] a duty to promote the reasonable and beneficial use of water resources in order to maximize their social and economic benefits to the people of this state."<sup>116</sup> This maximization of social and economic benefits entailed consideration of domestic water use needs (drinking water) and the original intent of the sovereign reservation, that is, preservation of "the rights of native tenants during the transition to a western system of private property."<sup>117</sup> The court therefore committed itself to "uphold the exercise of Native Hawaiian and traditional and customary rights as a public trust purpose."<sup>118</sup> Private commercial use was absent from this list of public trust purposes.<sup>119</sup>

In determining whether a particular use comports with the new public trust purposes, the court reasoned that "any balancing between public and private purposes begin[s] with a presumption in favor of public use, access, and enjoyment,"<sup>120</sup> with consideration for the interests and needs "of present and future generations."<sup>121</sup> Accordingly, the court directed the Commission, "the primary guardian of public rights under the trust," to "take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decision-making process"<sup>122</sup> but reserved for itself "the ultimate authority to interpret and defend the public trust in Hawai'i."<sup>123</sup>

<sup>112</sup> See *Waiahole*, 94 Hawai'i at 133-44, 9 P.3d at 445-56.

<sup>113</sup> *Id.* at 135, 9 P.3d at 447 (emphasis added).

<sup>114</sup> See, e.g., *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 452 (1892).

<sup>115</sup> See *Waiahole*, 94 Hawai'i at 136, 9 P.3d at 448.

<sup>116</sup> *Id.* at 139, 9 P.3d at 451. The court tacitly acknowledged that its view of the public trust was unconventional. See *id.* at 140, 9 P.3d at 452.

<sup>117</sup> *Id.* at 137, 9 P.3d at 449.

<sup>118</sup> *Id.*

<sup>119</sup> Cf. *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 712 (Cal. 1983).

<sup>120</sup> *Waiahole*, 94 Hawai'i at 142, 9 P.3d at 454.

<sup>121</sup> *Id.* at 141, 9 P.3d at 453.

<sup>122</sup> *Id.* at 143, 9 P.3d at 455.

<sup>123</sup> *Id.*

The court then vacated a number of the Commission's parsimonious allocations to Leeward Oahu—where all growth is projected by Oahu's general and development plans—as unsupported by the record. The court remanded those aspects of the contested case for more detailed findings.<sup>124</sup> The court concluded that, notwithstanding months of hearings and deliberation, volumes of testimony and over 500 exhibits, the permit applicants had not adequately proven their need for the water allocated.<sup>125</sup>

Under the court's public trust rubric, the failure to demonstrate the need for a specific quantity of water means that the water must remain unused to safeguard the public's interest in preservation. Indeed, the court reasoned that the public trust required the Commission to take precautionary action to preserve an appropriate level of instream flow,<sup>126</sup> notwithstanding the lack of scientific data regarding the level of water necessary to prevent environmental degradation.<sup>127</sup> The court even vacated the instream flow buffer imposed by the Commission and ordered it to establish permanent instream flow standards "with utmost haste and purpose" in a manner consistent with the opinion.<sup>128</sup>

The expansion of the public trust and increased roles for the Commission and the courts in overseeing water use required the court to eliminate correlative rights. Ironically, the court accomplished this by first affirming that "th[e] state continues to recognize the 'correlative rights rule'" and then extending that rule "to all ground waters of the state."<sup>129</sup>

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<sup>124</sup> See *id.* at 189, 9 P.3d at 501-02.

<sup>125</sup> See *id.* at 158, 163-64, 171-72, 9 P.3d at 470, 475-76, 483-84.

<sup>126</sup> *Id.* at 156, 9 P.3d at 468.

<sup>127</sup> See *id.* at 154-56, 9 P.3d at 466-68. The Hawai'i Supreme Court stated:

Where scientific evidence is preliminary and not yet conclusive regarding the management of fresh water resources which are part of the public trust, it is prudent to adopt "*precautionary principles*" in protecting the resource. That is, where there are present or potential threats of serious damage, lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation.

*Id.* at 154, 9 P.3d at 466.

<sup>128</sup> *Id.* at 155-57, 9 P.3d at 467-69.

<sup>129</sup> *Id.* at 177-78, 9 P.3d at 489-90. The court took this step only to close the door left open by *City Mill*. See *id.* Taken at face value, this would seem to dispel the notion that surface owners have no rights in the underlying water. But the court seized upon ambiguities needlessly created in *Reppun v. Board of Water Supply*, 65 Haw. 531, 656 P.2d 57 (1982), to reshape the correlative rights doctrine in Hawai'i. See *Waiahole*, 94 Hawai'i at 177-78, 9 P.3d at 489-90. In *Reppun*, the Court held that "where surface water and groundwater can be demonstrated to be physically interrelated as parts of a single system, established surface water rights may be protected against diversions that injure those rights, whether the diversion involves surface water or groundwater." *Reppun*, 65 Haw. at 555, 656 P.2d at 73. The court went on to inject confusion into settled law, stating that groundwater rights "have never been defined with exactness and the precise scope of those rights have always remained subject to development." *Id.* at 555 n.16, 656 P.2d at 73 n.16.

The *Waiahole* court's vision of correlative rights bore little resemblance to the rule as it was established in *City Mill*. Under *Waiahole*, surface water owners in non-designated areas must obtain the Commission's approval that the requested withdrawal is "necessary for reasonable use," which, according to the court, cannot be determined until the owner first receives the requisite state and county land use approvals.<sup>130</sup> Without a certificate of use, non-overlying applicants may appropriate and transfer groundwater to distant lands.<sup>131</sup> And all water uses in designated areas must conform to chapter 174C, which effectively eliminates correlative rights in those areas.<sup>132</sup> In this water-management system, surface owners are in no better position than any other applicant before the Commission.<sup>133</sup>

#### D. The Result: Water Trumps All

The court's analysis of the public trust and correlative rights is appealing in many ways but ultimately suffers from a two fundamental analytical errors. The first error arises from the nature of the public trust doctrine. The public trust is

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<sup>130</sup> *Waiahole*, 94 Hawai'i at 178, 9 P.3d at 490.

<sup>131</sup> *Id.*

<sup>132</sup> Overlying owners in designated areas now have no superior rights to the waters beneath their lands in relation to any other permit holder. *See id.* at 179, 9 P.3d at 491. Accordingly, a permit holder may appropriate underground waters if the Commission finds such appropriation is "consistent with the public interest and the general plans and land use policies of the State and counties." *Id.* Chapter 174C allows an overlying owner to gain priority over new permit holders only if he can establish that the intended use is one that existed before July 1, 1987, and that such use is reasonable and beneficial. *See id.* This, too, is inconsistent with *City Mill* because correlative rights "are not lost by nonuse." *See, e.g.,* Kevin L. Patrick & Kelly E. Archer, *A Comparison of State Groundwater Laws*, 30 TULSA L.J. 123, 141 (1994). Furthermore, *City Mill* held that the government could not prohibit a new correlative rights holder from tapping a common underlying aquifer while allowing existing users to continue drawing water. *See City Mill v. Honolulu Sewer & Water Comm'n*, 30 Haw. 912, 946-47 (1929), *overruled by Waiahole*, 94 Hawai'i 97, 9 P.3d 409 (2000).

<sup>133</sup> Recall that *City Mill* held that overlying owners have protectable interests in waters beneath their property. In reliance on this rule, the surface owners argued that their correlative rights could not be taken without compensation. The *Waiahole* court rejected their claims. *City Mill* notwithstanding, the court reasoned that landowners never had cognizable rights in underlying water because "[u]sfructuary water rights . . . have always been incomplete property rights." *Waiahole*, 94 Hawai'i at 181, 9 P.3d at 493 (citation and internal quotation marks omitted). This dismissive statement transformed what were definable correlative rights (meaning coequal to other surface owners) into mere usufructuary rights (meaning the right to the benefits of another's property). *Compare* *State v. Michels Pipeline Const., Inc.*, 217 N.W.2d 339, 349 (Wis. 1974), with BLACK'S LAW DICTIONARY 1543 (7th ed. 1999). The court also brought its analysis back to the public trust and held that chapter 174C "rests on the further principle that the state holds all waters of the state in trust for the benefit of its people" and, therefore, the right to own or use underlying water was never one of the "bundle of rights" in fee simple ownership. *Waiahole*, 94 Hawai'i at 182, 9 P.3d at 494.



a principle of law that necessarily preceded the creation of property rights in Hawai'i.<sup>134</sup> The Court acknowledged as much in the opinion.<sup>135</sup> Accordingly, when real property rights were first recognized in the Great Mahele in 1848,<sup>136</sup> any limitation on the concomitant water rights was established and vested at the same time. The natural resources amendments, debated and approved in 1978, cannot inform private property rights established over a hundred years earlier. In other words, the effect of the natural resources amendments, if any, is prospective and subsequent to their enactment. The titles that passed to private owners from the Kingdom of Hawai'i cannot be rewritten to exclude what at the time of transfer was an appurtenance of real property.

Furthermore, even if the constitutional amendments applied retroactively, the state has no more power to declare that recognized water rights never really existed than it does to claim that title to all real property is now and always has been with the state. Water rights are property rights and cannot be taken except for a public use and upon the payment of compensation.<sup>137</sup> This is true whether the taking is by regulation, statute, or constitutional amendment because all state

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<sup>134</sup> See, e.g., *Waiahole*, 94 Hawai'i at 182, 9 P.3d at 494.

<sup>135</sup> *Id.*

<sup>136</sup> See *Pub. Access Shoreline Haw. v. Planning Comm.*, 79 Hawai'i 425, 443-47, 903 P.2d 1246, 1263-68 (1995).

<sup>137</sup> Water rights are property rights and compensation is owed when water rights are taken for a public use. *Dugan v. Rank*, 372 U.S. 609, 625 (1963) ("[W]hen the Government acted . . . 'with the purpose and effect of subordinating' the respondents' water rights to the Project's uses . . . with the result of depriving the owner of its profitable use[,] the imposition of such a servitude would constitute an appropriation of property for which compensation should be made.") (citations omitted); *United States v. Gerlach Livestock Co.*, 339 U.S. 725 (1950) (holding that riparian owners were entitled to compensation for the loss of their riparian rights to traditional seasonal inundation, notwithstanding California's water resources amendment); *Int'l Paper Co. v. United States*, 282 U.S. 399, 407 (1931) ("The petitioner's right was to the use of the water; and when all the water that it used was withdrawn from the petitioner's mill and turned elsewhere by government requisition . . . it is hard to see what more the Government could do to take the use."); *Hage v. United States*, 51 Fed. Cl. 570, 576 (2002) ("The plaintiffs proved they have vested water rights in the ditches, wells, creeks, and pipelines . . ."); *Tulare Lake Water Storage Dist. v. United States*, 49 Fed. Cl. 313 (2001) ("[B]y limiting plaintiffs' ability to use an amount of water to which they would otherwise be entitled, the government has essentially substituted itself as the beneficiary . . ."); *Fallini v. Hodel*, 725 F. Supp. 1113 (D. Nev. 1989), *aff'd*, 963 F.2d 275 (9th Cir. 1992) (holding that by preventing the full exercise of the plaintiff's water use rights acquired under state and federal permits, the government had effected a taking); *Sorensen v. Lower Niobrara Nat'l Res.*, 376 N.W.2d 539, 550 (Neb. 1985) ("[A] landowner's right to use ground water is a proprietary appurtenance inseparable from the land benefited, and, therefore, a right protected by the Constitution . . ."); *In re A-B Cattle Co. v. United States*, No. 27714, 1978 Colo. LEXIS 572 (Aug. 21, 1978) (holding that Colorado appropriation permit holders are entitled to the quantity and quality of water as it existed at the time of appropriation); *City Mill Co. v. Honolulu Sewer & Water Comm'n*, 30 Haw. 912, 934, 947 (1929), *overruled by Waiahole*, 94 Hawai'i 97, 9 P.3d 409 (2000) (holding that denial of a well permit effected a taking of property).

actions are subject to the Fifth Amendment.<sup>138</sup> This is federal law. State constitutions do not trump the federal Constitution. And a state cannot provide more limited protection of individual rights through its own constitution than is guaranteed by the federal Constitution.

The second error centers on the sovereign reservation. Hawai'i territorial decisions plainly held that the kingdom did not retain ownership of groundwater when real property was transferred to private hands.<sup>139</sup> Indeed, *City Mill* addressed this precise question and held that although "'all mineral or metallic mines' were reserved to the Hawaiian government, . . . *there was no reservation whatever of the subterranean waters.*"<sup>140</sup> Accordingly, groundwater passed to and was owned by private individuals, and correlative rights have been the rule since the establishment of private titles.<sup>141</sup> This "conception of the law cannot now be altered simply because there is danger" to the water supply, at least not without compensation to the individuals who are made to bear the loss for the benefit of society at large.<sup>142</sup>

Because the public trust doctrine did not extend to groundwater until *Waiahole*, "owners of lands under which lies an artesian basin ha[d] rights to the waters of that basin."<sup>143</sup> That is, every surface owner had the right to "use water therefrom as long as he d[id] not injure thereby the rights of other [correlative rights holders] and that in times when there is not sufficient water for all each . . . [was] limited to a reasonable share of the water."<sup>144</sup> Government interference with these rights, even if done for the good of the community, was an unconstitutional taking of property.<sup>145</sup>

A court cannot by judicial decision take property rights without compensation.<sup>146</sup> Nor should an otherwise unsupported opinion be saved by the observa-

<sup>138</sup> When ratified, the Takings Clause—like the other provisions of the Bill of Rights—applied only to the federal government. *Scott v. City of Toledo*, 36 F. 385, 395 (Ohio C.C. 1888). The clause has since been made applicable to the states through the Due Process Clause of the Fourteenth Amendment. *See, e.g., Webb's Fabulous Pharmacies, Inc. v. Beckwith*, 449 U.S. 155, 160 (1980).

<sup>139</sup> *City Mill*, 30 Haw. at 934 ("[N]o reason occurs to us which would sustain the view that the Territory is, or that its predecessors were, the owners of all artesian waters in the Territory."); *see also* *King v. Oahu Ry. & Land Co.*, 11 Haw. 717, 725 (1899) ("[T]he people of Hawaii hold the absolute rights to all its *navigable waters* and the soils under them for their own common use.") (emphasis added).

<sup>140</sup> *City Mill*, 30 Haw. at 934 (emphasis added).

<sup>141</sup> *Id.*

<sup>142</sup> *Id.* at 934-35. The *Waiahole* court acknowledged that *City Mill* explicitly excluded groundwater from the public trust but, disagreeing with that result, simply overruled it. *Waiahole*, 94 Hawai'i at 133-34, 9 P.3d. at 445-46.

<sup>143</sup> *City Mill*, 30 Haw. at 923.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.* at 947.

<sup>146</sup> *Hughes v. Washington*, 389 U.S. 290, 296-97 (1967) (Stewart, J., concurring); *Sotomura v. County of Hawai'i*, 460 F. Supp. 473, 482-83 (D. Haw. 1978); *Robinson v. Ariyoshi*, 441 F.

tion that the court has only now discovered that the claimed right never really existed. While the law is subject to change, such change cannot be at the expense of constitutionally protected interests. Property law in particular requires stability because money is invested, plans are made, and deals are structured based upon existing principles. Some prudence is therefore required when courts depart from long-held rules or eliminate established rights, as noted in our conclusion.

The opinion in *Waiahole* was not prudent. The court fundamentally altered the legal landscape by bringing groundwater within the public trust and dramatically reducing a surface owner's ability to make reasonable use of underlying water. Under *City Mill*, surface owners had the right to use underlying water, subject only to the limitation that such use not injure the relative interests of other overlying owners.<sup>147</sup> This right was not lost by nonuse and remained with the property and passed from owner to owner as title to the land was transferred.<sup>148</sup> Under *Waiahole*, however, correlative rights in non-designated areas essentially rise or fall with land use permits and Commission approval.<sup>149</sup> In designated water management areas, no correlative rights remain. A surface owner has no greater interest in underlying waters than any other permit holder and therefore, groundwater may be appropriated and transferred over the surface owner's objections.<sup>150</sup>

It is difficult to escape the conclusion that valuable rights were lost in *Waiahole*. This is one of the problems with the remaking of private property law of the sort proposed by water preservationists: property rights, "one of the trinity of fundamental values that has defined our Nation's commitment to the integrity of the person since its founding,"<sup>151</sup> are invariably sacrificed for what happens just to be one of many conceptions of the public good.

It is also clear that water use is necessary to sustain commercial and residential growth, which are in turn critical to the economy and Hawai'i's ever-

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Supp. 559 (D. Haw. 1977), *aff'd*, 753 F.2d 1468, 1474 (9th Cir. 1985), *vacated*, 477 U.S. 902 (1986); *Bott v. Dept. of Natural Res.*, 327 N.W.2d 838, 849-53 (Mich. 1982).

<sup>147</sup> *City Mill*, 30 Haw. at 923.

<sup>148</sup> See, e.g., Patrick & Archer, *supra* note 132, at 141.

<sup>149</sup> *In re Water Use Permit Applications (Waiahole)*, 94 Hawai'i 97, 178-79, 9 P.3d 409, 490-91 (2000).

<sup>150</sup> *Id.*

<sup>151</sup> *Cooley v. United States*, 46 Fed. Cl. 538, 546 (2000); *accord* *San Remo Hotel L.P. v. City & County of San Francisco*, 41 P.3d 87, 120 (Cal. 2002) (Brown, J., dissenting) ("The idea that 'property ownership is the essential prerequisite of liberty has long been a fundamental tenet of Anglo-American constitutional thought.'" (quoting JAMES W. ELY, JR., *THE GUARDIAN OF EVERY OTHER RIGHT* 43 (1998))); David L. Callies, *Regulatory Takings and the Supreme Court: How Perspectives on Property Rights Have Changed from Penn Central to Dolan, and What State and Federal Courts are Doing About It*, 28 STETSON L. REV. 523, 526 (1999) ("Property rights, and in particular rights in land, have always been fundamental to and part of the preservation of liberty and personal freedom in the United States.").

growing housing needs. Conservation of water and other natural resources is wise planning. But preservation for the sake of preservation, as mandated by *Waiahole*, serves neither this nor the next generation. One reason is that planning for the development of private commercial uses becomes impracticable in a preservationist system. Water use rights, which previously rested on a predictable system of property ownership, are made captive to the allocation decisions of an unelected commission. Under *Waiahole*'s public trust formulation, private commercial uses invariably take a backseat to preservation, domestic needs, and agriculture. This makes it difficult for landowners to plan for or to proceed with future uses. In Hawai'i, where affordable housing is scarce and new development is necessary to meet demand, this preservation-minded system will certainly mean that fewer homes (and the necessary accompanying commercial projects) will be built, and those that are built will cost more. This is not consistent with either Hawai'i's planning regime or the public interest.

#### V. AFTER WAIAHOLE: WATER WILL DISRUPT PLANNING

Planning and the use of plans at the state and county levels are critical steps to land use decisions in Hawai'i. The careful and prolonged planning process of the past twenty years has resulted in consensus on the level and direction of growth and development on Oahu: away from the Windward side and towards the Leeward side. To adversely affect that direction in proceedings dealing with water allocation, which is important but only one part of the planning puzzle, is contrary to the law expressed in case, statute, and charter, and the policies expressed in the plans.<sup>152</sup> The tail of water use allocation simply cannot wag the dog of land use decision-making by the Hawai'i state and county plans and planning processes. This concept is confirmed not only by Hawai'i's courts, but also by the courts of virtually every jurisdiction that have considered the place of planning in land use decision-making. The Commission's role is to follow that planning process and the requirements of those plans; it is not to undertake land use planning itself by means of regulating stream flows or allocating water use. The Commission, like all state and county agencies, is bound by state and county plans, and these plans direct growth—and the water to serve it—to the Leeward side.

The following sections explore the water use regulatory schemes in Arizona, Colorado, and New Mexico. These regulatory schemes demonstrate

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<sup>152</sup> See Douglas W. MacDougal, *Private Hopes and Public Values in the "Reasonable Beneficial Use" of Hawai'i's Water: Is Balance Possible?*, 18 U. HAW. L. REV. 1, 2 (1996) (noting that, in enacting a state water code, "the Legislature intended that the Water Commission strike a balance between and among" demands for private, economically-oriented allocations and instream flows).

that the need for sound water use planning and management is not unique to Hawai'i. Moreover, these examples may help in facilitating discussion as to how Hawai'i can better prepare for current and future water use needs.

## VI. INTEGRATION OF WATER RIGHTS POLICY WITH LAND USE CONTROLS IN ARIZONA

### A. Water Sources in Arizona

Arizona is an arid state.<sup>153</sup> "The principal sources of surface water [in Arizona] are the Colorado River and the Salt River."<sup>154</sup> The Colorado River, "the [longest] river in the southwest United States at 1450 miles in length, drains approximately 250,000 square miles with a drainage area extending over [seven] states . . . [and] northwestern Mexico."<sup>155</sup> Sixteen and a half million acre-feet ("MAF")<sup>156</sup> are allocated for use, of which 1.5 MAF is allocated to Mexico.<sup>157</sup>

The first multi-purpose federal reclamation project, "the Salt River Project [("SRP")] has been delivering water to central Phoenix since 1903. . . . [It] currently delivers more than one million acre-feet of water to its water service area of 240,000 acres. Initially designed for agricultural irrigation, SRP now primarily delivers wholesale untreated water to municipal water providers."<sup>158</sup> The Central Arizona Project ("CAP") system, managed and operated by the Central Arizona Water Conservation District,<sup>159</sup> is connected to the SRP system.<sup>160</sup>

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<sup>153</sup> James Holway & Katharine Jacobs, *Managing for Sustainability in Arizona, USA: Linking Climate, Water Management and Growth*, in WATER RESOURCES SUSTAINABILITY (Larry W. Mays ed., forthcoming Aug. 2006) (manuscript at 4, on file with authors). "Conditions are generally dry (ranging from 3 to 11 inches of rainfall annually) and warm (average daytime temperatures of almost 90 degrees Fahrenheit, with daytime summer temperatures commonly above 100 degrees) in the southern and central basins." *Id.* at 5.

<sup>154</sup> *Id.* at 4.

<sup>155</sup> *Id.*

<sup>156</sup> "An acre-foot is the amount of water required to cover an acre of land with one foot of water. It is about 325,851 gallons." Linley Erin Hall, *Simple Solution*, ARIZ. ST. U. RES. MAG., Winter 2004, at 38, available at <http://www.asu.edu/research/researchmagazine/2004Winter/Wnt04p38-41.pdf>.

<sup>157</sup> Holway & Jacobs, *supra* note 153, at 4.

<sup>158</sup> *Id.* at 4-5.

<sup>159</sup> "CAWCD is a municipal corporation, also known as a public improvement district. This quasi-governmental entity was formed to repay the federal government for the reimbursable costs of construction and to operate, maintain, and manage CAP." Central Arizona Project, Management, <http://www.cap-az.com/contacts/> (last visited Oct. 27, 2007).

<sup>160</sup> See Katharine L. Jacobs & James M. Holway, *Managing for Sustainability in an Arid Climate: Lessons Learned from 20 Years of Groundwater Management in Arizona, USA*, 12 HYDROGEOLOGY J. 52, 54 (2004).

### B. Demand for Water in Arizona

Arizona is experiencing rapid population growth.<sup>161</sup> Arizona's characteristics—that it is a very arid state, is dependant on a limited water source, and is quickly growing in population—have led to the development of significant water rights regulations in the form of strict land use controls. In addition to the CAP and SRP, which are specifically integrated with the Colorado and Salt River water usages, Arizona has implemented programs which, while respecting federal authority, implement statewide water rights policies through its Groundwater Management Act and more specifically, use of its Active Management Areas.

### C. Development of Arizona Regulatory Programs

“One key component of Arizona's approach to conservation was the quantification of grandfathered groundwater rights, which allows existing groundwater users to aggressively pursue conservation opportunities without fearing that they will forfeit water rights due to the ‘use it or lose it’ standard which applies in many prior appropriation systems.”<sup>162</sup> Another characteristic of prior appropriation, described as “first in time, first in right,” authorizes that “the first user to put water to beneficial use has the highest priority right, and can divert [the user's] full allocation without regard for more junior users in the event of shortages in surface water flows.”<sup>163</sup> Prior to 1980, Arizona rejected this formulation of the prior appropriation doctrine in favor of the “reasonable use” doctrine, which provides prior users “with little or no protection from new withdrawals.”<sup>164</sup>

#### 1. Groundwater Management Act of 1980

Arizona's Groundwater Management Act of 1980 (“GMA”)<sup>165</sup> “focused almost exclusively on groundwater and did not affect the pre-existing surface water management code, which remains a separate body of law.”<sup>166</sup>

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<sup>161</sup> Central Arizona is currently home to 4.7 million people and is projected to reach eleven million residents by 2050. See Jim Holway, *Urban Growth and Water Supply*, in ARIZONA WATER POLICY: MANAGEMENT INNOVATIONS IN AN URBANIZING, ARID REGION (B. Colby & K. Jacobs eds., forthcoming 2006) [hereinafter Holway, *Urban Growth*].

<sup>162</sup> *Id.* at 8-9.

<sup>163</sup> Holway & Jacobs, *supra* note 153, at 12.

<sup>164</sup> *Id.*

<sup>165</sup> ARIZ. REV. STAT. §§ 45-401 to -407 (LexisNexis 2006).

<sup>166</sup> Holway & Jacobs, *supra* note 153, at 12 (citing Robert Glennon & T. Maddock, *The Concept of Capture: The Hydrogeology and Law of Stream/Aquifer Interactions*, 43 ROCKY MTN. MIN. L. INST. 22 (1997)).

The three primary goals of the GMA are (1) to control the severe overdraft currently occurring in many parts of the state, (2) to provide a means to allocate the state's limited groundwater resources to most effectively meet the changing needs of the state, and (3) to augment Arizona's groundwater through water supply development.<sup>167</sup> To accomplish these goals, the GMA set up a comprehensive management framework and established the Arizona Department of Water Resources [("ADWR")] to administer the GMA's provisions.<sup>168</sup>

"Through rule-making procedures, criteria have been specified that clarify the requirements of the GMA."<sup>169</sup> "The GMA established three levels of water management to respond to different groundwater conditions."<sup>170</sup>

The first level, provisions applicable statewide,

are relatively limited, focusing on licensing of well drillers, well registration, notifications of supply adequacy for new residential developments and prohibitions on transportation of groundwater between most sub-basins in the state. The next level of management applies to Irrigation Non-Expansion Areas . . . , where no new land can be brought into agricultural production, but there are no limits on nonirrigation uses of water.<sup>171</sup>

## 2. Active Management Areas

"The most extensive management provisions are applied to Active Management Areas [("AMAs")], where groundwater overdraft was most severe."<sup>172</sup> "The objective of Arizona's AMA demand management programs is to reduce overdraft by improving the efficiency with which all sources of water are used, and by prohibiting certain high water use activities."<sup>173</sup>

The ADWR "is required to prepare a series of water management plans for each AMA, containing enforceable conservation requirements for all large water users, a plan for augmentation of groundwater supplies, a conservation

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<sup>167</sup> Jacobs & Holway, *supra* note 160, at 55; see ARIZ. REV. STAT. § 45-401 (LexisNexis 2006).

<sup>168</sup> Jacobs & Holway, *supra* note 160, at 55.

<sup>169</sup> *Id.* at 58.

<sup>170</sup> *Id.* at 55.

<sup>171</sup> *Id.* at 55 (footnote omitted); see ARIZ. REV. STAT. §§ 45-431 to -440, -543, -544, -578, -595 (LexisNexis 2006).

<sup>172</sup> Jacobs & Holway, *supra* note 160, at 55.

<sup>173</sup> *Id.* at 61. Over eighty percent of Arizona's population lives in AMAs, and "over 50% of total water use in the state and 70% of the state's groundwater overdraft" occurs in AMAs, "but only 23% of the [state's] land area" is covered by an AMA. *Id.* at 56. "Within the AMAs, total demand in 1998 was 3,718,500 acre-feet, of which 53% was used for agriculture. Overdraft in 1998 was estimated at 627,000 acre-feet." *Id.*

assistance program, and information regarding water quality.”<sup>174</sup> These five plans must be “adopted at specified dates between 1980 and 2025 to move the AMAs incrementally towards their management goals through demand management and supply enhancement.”<sup>175</sup>

Arizona’s strategy to achieving these various goals “is to regulate the municipal water provider (city, town, or private water company serving water) by setting conservation targets (per capita use rates) for the water providers or by requiring the water providers to adopt best management practices.”<sup>176</sup> The hope is that this indirect regulatory approach will “lead[] the water providers, who are closer to their customers, to implement effective educational [programs/initiatives/policies] and financial incentives” to influence the decisions of individual homeowners.<sup>177</sup>

For the First Management Plan, covering the period from 1985 to 1990, “water providers were required to reduce their per capita use by a fixed percentage (0 to 11 percent) based on the” 1985 per capita use rate.<sup>178</sup> “The GMA required additional reductions in per capita use rates for both the second and third management periods,” 1990 to 2000 and 2000 to 2010, respectively.<sup>179</sup> “The AMAs are currently in the middle of the Third Management Plan,” covering 2000 to 2010.<sup>180</sup> “For the Third Management Plan, individual per capita use targets were calculated for each water provider based on [its] historic uses, conservation potential of existing uses, and assigned model use rates for new development that assume a high level of efficiency.”<sup>181</sup>

### 3. Regulation outside AMAs

[A] number of efforts have been made to strengthen water planning requirements for areas outside of the [AMAs]. In 2000, Arizona’s Growing Smarter requirements were modified to require a water resources element as part of the county and municipality comprehensive planning requirements. The water resources

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<sup>174</sup> *Id.* at 58 (citing ARIZ. REV. STAT. § 45-564 (LexisNexis 2006)).

<sup>175</sup> Jacobs & Holway, *supra* note 160, at 58; see ARIZ. REV. STAT. § 45-562 (LexisNexis 2006).

<sup>176</sup> Jacobs & Holway, *supra* note 160, at 61.

<sup>177</sup> *Id.*

<sup>178</sup> Holway, *Urban Growth*, *supra* note 161, at 7; see ARIZ. REV. STAT. § 45-564(B)(2) (LexisNexis 2006).

<sup>179</sup> Holway, *Urban Growth*, *supra* note 161, at 7; see ARIZ. REV. STAT. §§ 45-565(A)(2), 45-566(A)(2) (LexisNexis 2006).

<sup>180</sup> Holway, *Urban Growth*, *supra* note 161, at 7; see ARIZ. REV. STAT. § 45-566 (LexisNexis 2006).

<sup>181</sup> Holway, *Urban Growth*, *supra* note 161, at 7; see ARIZ. REV. STAT. § 45-566(A)(2) (LexisNexis 2006).



element is required for counties with a population greater than 125,000; and for municipalities with a population of more than 2,500 . . . unless they have fewer than 10,000 residents and are growing at a rate of less than 2 percent per year. This comprises 4 of 15 counties and 23 municipalities situated outside of the [AMAs].<sup>182</sup>

The water resources element must identify:

[(1)] known legally and physically available supplies, [(2)] . . . demand resulting from growth projected in the general plan (generally 20 years of growth), and [(3)] . . . how demand will be served by currently available supplies, or prepare a plan to obtain additional necessary water supplies.<sup>[183]</sup> Communities are specifically not required to go beyond the existing available information in preparing these comprehensive plan elements.<sup>[184]</sup> Additional water resources planning requirements were adopted by the state legislature in 2005.<sup>[185]</sup> All community water systems outside of AMAs must prepare: [(1)] a water supply plan; [(2)] a drought preparedness plan; and [(3)] a water conservation plan.<sup>[186]</sup> This legislation also required water providers outside of AMAs to begin reporting their annual water use.<sup>[187]</sup> These plans will be due for large providers beginning in 2007 and for small providers one year later.<sup>188</sup>

Other regulatory programs established in Arizona that deserve mention include: the Underground Water Storage and Recovery Program established in 1986;<sup>189</sup> the Central Arizona Groundwater Replenishment District;<sup>190</sup> the Arizona Water Banking Authority of 1996;<sup>191</sup> and the Non-Per Capita Conservation Program implemented in 1995.<sup>192</sup>

#### *D. What to Take Away From the Arizona Experience*

The most important facet of Arizona's approach to water use regulation is that it is designed to sustain the economic health of the state through creative

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<sup>182</sup> Holway & Jacobs, *supra* note 153, at 24.

<sup>183</sup> *Id.* (citing ARIZ. REV. STAT. § 45-342 (LexisNexis 2007) and ARIZ. REV. STAT. § 11-821 (LexisNexis 2006)).

<sup>184</sup> *Id.*; see ARIZ. REV. STAT. § 11-821(E) (LexisNexis 2006).

<sup>185</sup> Holway & Jacobs, *supra* note 153, at 24 (citing ARIZ. REV. STAT. § 45-342 (LexisNexis 2006)).

<sup>186</sup> *Id.*; see ARIZ. REV. STAT. § 45-342(A) (LexisNexis 2006).

<sup>187</sup> Holway & Jacobs, *supra* note 153, at 24.

<sup>188</sup> *Id.*; see ARIZ. REV. STAT. § 45-342(B) (LexisNexis 2006).

<sup>189</sup> See Jacobs & Holway, *supra* note 160, at 59; ARIZ. REV. STAT. § 45-801.01 (LexisNexis 2007).

<sup>190</sup> See Jacobs & Holway, *supra* note 160, at 59.

<sup>191</sup> See *id.*; ARIZ. REV. STAT. §§ 45-2401 to -2472 (West 2003 & Supp. 2006).

<sup>192</sup> See Holway, *Urban Growth*, *supra* note 161, at 8.

conservation efforts. There are two useful examples. The first is the Assured Water Supply Program, which is designed to sustain growth by conserving

groundwater resources and promoting long-term water[]supply planning within the state's five [AMAs]. This is accomplished through regulations that mandate the demonstration of sufficient (primarily renewable) water supplies for 100 years for new subdivisions. The supplies must be physically and legally available and of adequate quality; the developer or water provider must also show financial feasibility and compliance with the conservation requirements and the management goal[s] for the AMA.<sup>193</sup>

The second example of creativity is the use of effluent water. "Effluent water" is essentially treated sewage. Approximately seven percent of the water used in Arizona is effluent, "with [the] power plant cooling water at Palo Verde nuclear generating station west of Phoenix being the largest single user."<sup>194</sup> The Palo Verde plant is the only nuclear energy facility in the world that uses effluent for cooling water.<sup>195</sup> This coupling of effective water use and power generation has greatly benefited Arizona and its rapidly growing population. Even apart from the Palo Verde plant, "effluent is becoming an increasingly significant component of municipal water supplies" in Arizona.<sup>196</sup>

## VII. INTEGRATION OF WATER RIGHTS POLICY WITH LAND USE CONTROLS IN COLORADO

Colorado's water rights policy has been heavily influenced by several factors: the numerous rivers that cross Colorado state lines, water rights jurisprudence developed in common law, and a traditional state deference to municipal authority.

### A. Regulating Interstate Waters

Interstate waters are allocated among the states through which they cross by Supreme Court decree,<sup>197</sup> act of Congress<sup>198</sup> and interstate compact. Only

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<sup>193</sup> Jacobs & Holway, *supra* note 160, at 59; see also ARIZ. ADMIN. CODE § R12-15-701 to -730 (2007).

<sup>194</sup> Holway & Jacobs, *supra* note 153, at 5.

<sup>195</sup> Palo Verde Nuclear Generating Station, <http://www.pnm.com/systems/pv.htm> (last visited Oct. 27, 2007).

<sup>196</sup> Holway & Jacobs, *supra* note 153, at 5 ("[S]ubstantial investments have been made in advanced treatment and delivery systems to use reclaimed water for turf irrigation and aquifer recharge in many parts of Arizona.").

<sup>197</sup> *E.g.*, Colorado v. New Mexico, 459 U.S. 176 (1982).

<sup>198</sup> *E.g.*, Truckee-Carson-Pyramid Lake Water Rights Settlement Act of 1990, Pub. L. No. 101-618, §§ 201-210, 104 Stat. 3289 (1990).

this last means of allocation—compacts—effects the state's regulation of water rights that could serve as a model for Hawai'i.

Because Colorado has many rivers that originate within its borders and extend outward into other lands, Colorado has participated in numerous interstate compacts. These compacts quantify the water rights between states and countries that are tied to various bodies of water.<sup>199</sup> Colorado has also divided itself into Water Conservation Districts which allows for appropriation, regulation, and adjudication at a regional level.<sup>200</sup>

### *B. Colorado's Law of Prior Appropriation*

Colorado water law has been heavily influenced by

the state's history, and has evolved over time to adapt to the changing needs of the state's population.<sup>[201]</sup> Although Colorado's rules for the use of water emerged during the 1859 Colorado gold rush, the first [recognized] water right was an 1852 appropriation for irrigation. Even before Colorado attained statehood, its courts held that Colorado water law arises from necessity in an arid climate and that it includes the right to cross public or private lands to build water diversion and conveyance structures. This doctrine was subsequently adopted by the Colorado Constitution, which mandates that "[t]he water of every natural stream, *not heretofore appropriated*, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, *subject to appropriation . . .*"<sup>[202]</sup> The constitution also guarantees that "the right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied."<sup>[203]</sup> . . . Colorado's adoption of the prior appropriation doctrine, illustrated by the phrase "first in time, first in right," grants water rights prioritized by the chronological order in which they were [obtained]. The doctrine of prior appropriation generally consists of three requirements for obtaining a water right: (1) intent to make an appropriation; (2) taking or diverting the water from the stream; and (3)

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<sup>199</sup> See generally Upper Colorado River Compact, COLO. REV. STAT. § 37-62-101 (2006); La Plata River Compact, COLO. REV. STAT. § 37-63-101 (2006); Animas La Plata Project Compact, COLO. REV. STAT. § 37-64-101 (2006); South Platte River Compact, COLO. REV. STAT. § 37-65-101 (2006); Rio Grande River Compact, COLO. REV. STAT. § 37-66-101 (2006); Republican River Compact, COLO. REV. STAT. § 37-67-101 (2006); Costilla Creek Compact, COLO. REV. STAT. § 37-68-101 (2006); Arkansas River Compact, COLO. REV. STAT. § 37-69-101 (2006).

<sup>200</sup> See generally Colorado River Water Conservation District, COLO. REV. STAT. § 37-46-101 (2006); Southwest Water Conservation District, COLO. REV. STAT. § 37-47-101 (2006); Rio Grande Water Conservation District, COLO. REV. STAT. § 37-48-101 (2006); Republican River Water Conservation District, COLO. REV. STAT. § 37-50-101 (2006).

<sup>201</sup> Julia S. Walters, Comment, *Safeguarding Colorado's Water Supply: The New Confluence of Title Insurance and Water Rights Conveyances*, 77 U. COLO. L. REV. 491, 493 (2006).

<sup>202</sup> *Id.* at 493-94 (quoting COLO. CONST. art. XVI, § 5) (emphasis added).

<sup>203</sup> *Id.* (quoting COLO. CONST. art. XVI, § 6).

application of the water to beneficial use.<sup>[204]</sup>

Although the right to appropriate water in Colorado is constitutionally guaranteed, appropriators must use the statutory procedures prescribed in the Water Rights Determination and Administration Act of 1969<sup>[205]</sup> to receive a judicial decree from the proper water court in their district. The adjudication of the water right establishes the source and amount of the water supply, the point of diversion, the type and place of use, and the priority date of the water right.<sup>[206]</sup> The State Engineer is responsible for administering water rights in priority and preventing injury to other water users.<sup>[207]</sup>

Water rights do not . . . [convey] complete ownership of water but rather give the holder the right to use water for a particular beneficial use.<sup>[208]</sup> The Colorado Supreme Court defines a water right as "a right to use beneficially a specified amount of water, from the available supply of surface water or tributary ground water, that can be captured, possessed, and controlled in priority under a decree, to the exclusion of all others not then in priority under a decreed water right."<sup>[209]</sup> Despite variation in the requirement for a diversion, water must always be applied to beneficial use in order to establish an appropriation, and the beneficial use becomes the "basis, measure, and limit" of the appropriation.<sup>[210]</sup> Water rights are prioritized in the order each right was applied to beneficial use and adjudicated, and the priority list is used to distribute available water during times of shortage.<sup>211</sup>

### C. Deference to Local Authority

Colorado has a "tradition of state deference to local authority and control in matters of both land[ ] use and water supply."<sup>212</sup> "In this type of governance hierarchy, it is becoming ever more apparent that the majority of decisions about land and water use are being made" by municipal decision-making bodies.<sup>213</sup>

<sup>204</sup> *Id.* at 494-95 (citing A. Dan Tarlock, *Law of Water Rights and Resources*, § 5:71, at 5-72 (2005) and Farmers' High Line Canal & Reservoir Co. v. Southworth, 21 P. 1028, 1030 (Colo. 1889)).

<sup>205</sup> *Id.* at 495 (citing COLO. REV. STAT. ANN. §§ 37-92-101 to -103 (West 2005)).

<sup>206</sup> *Id.* (citing COLO. FOUND. FOR WATER EDUC., CITIZEN'S GUIDE TO COLORADO WATER LAW 6 (2003)).

<sup>207</sup> *Id.* (citing COLO. REV. STAT. ANN. § 37-92-301(1), (3) (West 2005)).

<sup>208</sup> *Id.* (citing COLO. REV. STAT. ANN. §§ 37-92-101 to -602 (West 1998)) (citations omitted).

<sup>209</sup> *Id.* (quoting Santa Fe Trail Ranches Prop. Owners Ass'n v. Simpson, 990 P.2d 46, 53 (Colo. 1999)).

<sup>210</sup> *Id.* at 495-96 (citing Santa Fe Trail Ranches Prop. Owners Ass'n, 990 P.2d at 53).

<sup>211</sup> *Id.* (citing A. Dan Tarlock, *Law of Water Rights and Resources*, § 5:30, at 5-49 (2005)) (citations omitted) (footnote call numbers omitted).

<sup>212</sup> Scott E. Coulson, Locally Integrated Management of Land-Use and Water Supply: Can Water Continue to Follow the Plow 16 (2005) (unpublished M.A. thesis, University of Colorado, on file with authors).

<sup>213</sup> *Id.*

Moreover, the actual process of supplying water to new growth is predominantly carried out by large municipalities, stemming from two specific functions of these entities: (a) large municipalities are the primary purveyors of water supply in the state, and (b) they are also the principal regulators of land-use. Planners recognize that local governments are the only entities that are granted with widespread capabilities for managing private lands.<sup>214</sup>

At the local level, land use planning and water resource management are tied together through the comprehensive plan and the assured water supply requirements. The comprehensive plan serves as a central policy framework for making water supply considerations:<sup>215</sup> "Because the comprehensive plan is viewed by the courts as justification for land-use decisions, it effectively adds a defensible rationale [for] implementing the plan policies [through] land-use controls."<sup>216</sup>

Equally "important are the products associated with the plan that are utilized in the daily activities of planning practitioners as instruments for guiding development. The first of these products are future population projections which can be translated into future water demands."<sup>217</sup> The second of these products is the inclusion of a water supply element that addresses infrastructure and acquisitions: "[A]lternative policy scenarios for obtaining the necessary water supplies are not subject to broad evaluation and public participation."<sup>218</sup>

#### *D. What to Take Away From the Colorado Experience*

Local governments matter:

Colorado has a long history of bottom-up control and delegation to local governments in matters of both land and water use. This history is visible in legislation such as the Areas and Activities of State Interest Act (1974),<sup>[219]</sup> the Local Government Land Use Control Enabling Act (1974),<sup>[220]</sup> the Colorado

<sup>214</sup> *Id.* at 16-17 (citation omitted).

<sup>215</sup> *Id.* at 19.

<sup>216</sup> *Id.*

<sup>217</sup> *Id.*

<sup>218</sup> *Id.* at 20.

<sup>219</sup> *Id.* at 33; see COLO. REV. STAT. §§ 24-65.1-101 to -108 (2006). The counties first gained control of these issues in 1974 when the Colorado General Assembly enacted House Bill 1041, the Areas and Activities of State Interest Act. See *City & County of Denver v. Bd. of Comm'rs*, 760 P.2d 656 (Colo. Ct. App. 1988). The Areas and Activities of State Interest Act delegates to the counties the power to supervise "land use with regard to areas and activities of 'state interest,' or those [areas and activities] which may have an impact on the people of the state . . . beyond the immediate scope of the project." Coulson, *supra* note 212, at 28.

<sup>220</sup> Coulson, *supra* note 212, at 33; see COLO. REV. STAT. §§ 29-20-101 to -205 (West 2002 & Supp. 2006).

Subdivision Act,<sup>221</sup> and more recently in the [Statewide Water Supply Initiative ("SWSI")] project.<sup>222</sup>

"[C]ounties are even granted statutory review and approval authorit[y] over the sit[e], design, and construction of water project facilities . . . [and] a host of other development actions."<sup>223</sup>

As the Colorado example shows, respect for and deference to local government in matters of water use and regulation is consistent and compatible with sound planning and conservation of water resources. If deference to local government works in a state like Colorado, which is burdened with vast water demands both internally and externally by other states, then deference to local government and the county plan can work in Hawai'i.

[T]he Local Government Land Use Control Enabling Act of 1974 mandates the creation of county planning commissions and the adoption of a "master plan for the physical development of the unincorporated territory of the county." Section (3)(a)(IV) advises that the master plan include a water supply element "showing the general location and extent of an adequate and suitable supply of water."

Coulson, *supra* note 212, at 34 (quoting *Johnson v. Bd. of Comm'rs*, 523 P.2d 157, 161 (Colo. Ct. App. 1974)); COLO. REV. STAT. § 30-28-106 (2006).

<sup>221</sup> Coulson, *supra* note 212, at 35; *see* COLO. REV. STAT. § 30-28-133 (2006).

The Colorado Subdivision Act of 1974 is the key[] component of Colorado's land and water use mandate. This . . . legislation requires all counties to promulgate subdivision regulations. Section (6)(a) makes county subdivision approval contingent upon proof of available water supply. Specifically, it requires that subdividers submit to the county "adequate evidence that a water supply that is sufficient in terms of quality, quantity, and dependability will be available to ensure an *adequate* supply of water for the type of subdivision proposed."

Coulson, *supra* note 212, at 35 (quoting COLO. REV. STAT. §§ 30-28-133; -133-1; -133-6(a); -133-3(d) (2006)).

One "county had defined 'adequate' as sufficient water to meet project needs for a period of 300 years, regardless of the water source." *Id.* at 38 (explaining El Paso County Land Development Code, § 51.2 (1986)). "The planning commission's determination of adequacy is [informed] by a set of established criteria for use when reviewing water supply proposals." *Id.* "The last components of the water availability mandate are the referral and review requirements of the Colorado Subdivision Act (1974), which order consultation with the state engineer prior to county subdivision approval . . ." *Id.* at 36-37. "The SWSI is an 18-month watershed-based study to inventory existing water supplies, projections of future water needs, and to compile the solutions which local water providers intend to use in meeting identified shortages . . ." *Id.* at 32. The SWSI will give planners the data necessary to comply with the other planning laws discussed in this section.

<sup>222</sup> Coulson, *supra* note 212, at 33-34; *see* COLO. REV. STAT. § 37-95-107.5 (2006).

<sup>223</sup> Coulson, *supra* note 212, at 28.

### VIII. INTEGRATION OF WATER RIGHTS POLICY WITH LAND USE CONTROLS IN NEW MEXICO

Lora Lucero and Dan Tarlock observed that “New Mexicans have known for years that the day of reckoning was coming but they . . . repressed this unpleasant reality . . . . [T]here is increasingly visible evidence of the collision between explosive population growth and diminishing water supplies. The state’s population has almost doubled since 1960 . . . .”<sup>224</sup> Furthermore,

[d]omestic wells have gone dry in Placitas, north of Albuquerque, where the National Guard was called to truck water into area residents. Building permits issued in the City of Santa Fe have jumped from 400 (2000-2001) to over 700 (2001-2002) in just a year, while pinon trees are dying from lack of water.<sup>225</sup>

In response, federal, state, regional, and local governments have attempted to address the water supply issue, and New Mexico has maintained a common law water rights jurisprudence based on “beneficial use” while continuing use of its “law of prior appropriations.”

#### A. *The Federal Response*

In May 2003, Secretary of the Interior Gale Norton announced the new Water 2025 initiative.<sup>226</sup> This initiative focuses resources on the Middle Rio Grande Valley, considered one of the ten Western “hot spots” where water rights conflict can be expected.<sup>227</sup> Specifically,

the Department of the Interior looked at growth projections, water availability, storage capacity, and environmental demands in order to focus on areas most vulnerable to water conflicts.

The Water 2025 plan identifies five challenges that need to be addressed to prevent crises and conflict in the West: (1) explosive population growth in areas of the West where water is already scarce, (2) frequent water shortages, (3) over-allocated watersheds, (4) aging water supply facilities, and (5) crisis management’s ineffectiveness in dealing with water conflicts. . . .<sup>228</sup>

The Water 2025 initiative . . . [uses] four main tools: (1) improved water efficiency, conservation, and water banks; (2) collaboration on a local level to “emphasize action and answers to avoid needless impasse”; (3) research to

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<sup>224</sup> Lora Lucero & A. Dan Tarlock, *Water Supply and Urban Growth in New Mexico: Same Old, Same Old or a New Era?*, 43 NAT. RESOURCES J. 803, 817 (2003).

<sup>225</sup> *Id.* at 817-18 (citation omitted).

<sup>226</sup> *Id.* at 818.

<sup>227</sup> *Id.*

<sup>228</sup> *Id.* at 818-19 (citation omitted).

improve desalination and other technologies; and (4) increased interagency cooperation.<sup>229</sup>

"A number of New Mexico water planners and decision-makers concur" with the federal government's assessment of the water situation, including Governor Richardson, and have modeled many state initiatives on those of the federal government.<sup>230</sup>

### *B. The State and Regional Response*

Before taking office, "Governor Richardson shared with the public his seven-point platform for managing the state's water resources, which he called 'H2O New Mexico—A Plan for Water Security.'"<sup>231</sup> First, Richardson called for

statewide, regional, and community water plans, which were to be completed by December 31, 2003 and submitted to the 2004 session of the New Mexico Legislature. Second, [Richardson] called for an end to the "indiscriminate permitting of domestic wells in New Mexico."<sup>232</sup> The [S]tate [E]ngineer estimate[d] that it [would] take another [600] years to complete the adjudication of water rights[,] . . . [so] Richardson proposed the creation of the New Mexico Water Court, with judges, mediators, and clerks to handle the [judicial] backlog . . . . Third, . . . the governor proposed a negotiation strategy to coordinate ongoing water issues with other states, Mexico, and Native American tribes and pueblos. Fourth, [Richardson proposed] phreatophyte removal [,] a favorite low-tech water conservation strategy[,] . . . remov[al] [of] the salt cedars from the river valleys[,] and restor[ation] [of] the watersheds. Fifth, [Richardson] embraced the creation of water banks to provide a mechanism where[by] an owner of water rights can lease conserved water for other beneficial uses without losing [or] []forfeiting[] those rights. Sixth, [the Governor] suggested that New Mexico use . . . national labs and state universities to research the latest water technology and conservation programs including desalinization, arsenic removal, security of water supplies, quality monitoring systems, and advanced irrigation technology. Finally, Richardson vowed to continue the effort . . . to upgrade [a] water rights file database . . . to track [one hundred] years of water rights ownership in the state.<sup>233</sup>

The Comprehensive State Water Plan Act of 2003<sup>234</sup> authorized production of "a comprehensive state water plan containing measures for integrating the

<sup>229</sup> *Id.* (citations omitted) (footnote call numbers omitted).

<sup>230</sup> *Id.* at 819.

<sup>231</sup> *Id.*

<sup>232</sup> *Id.* (citation omitted).

<sup>233</sup> *Id.* at 819-20 (citations omitted) (footnote call numbers omitted).

<sup>234</sup> N.M. STAT. ANN. §§ 72-14-3 to -3.2 (West 2007).



state and regional-level water plans.”<sup>235</sup> One commentator remarked that “implementation of the state plan may be hampered by its own conflicting objectives.”<sup>236</sup> “The legislation directs the Interstate Stream Commission [(“ISC”),] . . . with the Office of the State Engineer and the Water Trust Board[,] to prepare and implement the plan, which is envisioned as a ‘strategic management tool.’”<sup>237</sup> “[R]egional water plans are prepared by groups of area water users under supervision by the . . . [ISC].”<sup>238</sup> “Regional planning areas are delineated by the water user group based on ‘hydrological and political common interests.’”<sup>239</sup> The Comprehensive State Water Plan Act requires everything that might normally be expected in a state water plan.<sup>240</sup>

The regional water plans are nevertheless plagued by the

lack of regulatory potency. There has been “no statutory guidance for connecting the regional water plans with local land use and development decisions made by city councilors and county commissioners.”<sup>[241]</sup> Moreover, “the regional water plans are not tied to local comprehensive plans and have no relationship to the development permitting process undertaken by local government of the issuance of water right permits at the state level. . . . [This] gap between water and land-use planning is the Achilles Heel in the process.”<sup>242</sup>

Following a 1994 meeting, the ISC and others designed a New Mexico Interstate Stream Commission Regional Water Planning Handbook (“Hand-

<sup>235</sup> Coulson, *supra* note 212, at 14.

<sup>236</sup> *Id.* at 15 (citing Marilyn C. O’Leary, *Water Planning in New Mexico: Enigma, Paradox or Pattern?*, 24 J. LAND RESOURCES & ENVTL. L. 343-47 (2004)).

<sup>237</sup> Lucero & Tarlock, *supra* note 224, at 821.

<sup>238</sup> Coulson, *supra* note 212, at 15.

<sup>239</sup> *Id.* (citation omitted).

<sup>240</sup> Lucero & Tarlock, *supra* note 224, at 821.

[I]e., an inventory of the quantity and quality of the water resources, population projections and other water resource demands, water conservation strategies, a drought management component, restoration of riparian and watersheds . . . the preparation of water budgets for the state and all major river basins and aquifer systems, “recognition” of the relationship between water availability and land use decisions, strategies to coordinate all levels of government, identification of water-related infrastructure and management investment needs, opportunities to leverage federal and other funding, and integration of regional water plans with the state water plan. The ISC and the [S]tate [E]ngineer are directed to consult with the Indian nations, tribes, and pueblos; while the ISC is to ensure that public participation and public input are integrated throughout the planning process.

*Id.*

<sup>241</sup> Coulson, *supra* note 212, at 15 (quoting Lucero & Tarlock, *supra* note 224, at 823).

<sup>242</sup> *Id.* (quoting Lora A. Lucero, *Water and the Disconnects in Growth Management*, 31 URB. LAW. 871, 879 (1999)).

book").<sup>243</sup> Although specific provisions of the template of elements required to be in all regional water plans "are still [the] subjects of some dispute, from an institutional analysis perspective, the Handbook is significant in several respects. . . . The Handbook recognized . . . 'rules-in-use' and built flexible but extensive requirements for stakeholder participation into the planning requirements."<sup>244</sup>

A key feature of the Handbook is a template of elements to be included in all regional water plans.

....

The template requires that regional planners gather and assimilate several sorts of information about the physical, economic, demographic, and historical characteristics of the region and its water uses; that they understand and document the legal and institutional constraints affecting the region; that they assess the water resources available in terms of the sources and amounts of water supply and its quality for both surface and ground water; and that they document current uses and project future demand by a [forty]-year planning horizon. The requirement to develop shared time-and-place-specific information about these matters was explicitly designed to contribute to a common knowledge and understanding among participants of the collective action required of everyone in the region.<sup>245</sup>

### C. Local Initiatives

In New Mexico, as in most states, "land use decisions have traditionally been exclusively local ones . . . . New Mexicans thus expect that land and water issues will be linked, if at all, at the local rather than the regional, state, or federal level."<sup>246</sup> For instance, Santa Fe

now requires that developers install low flush toilets in new construction and retrofit between eight to twelve toilets per project depending on the size of the new construction. The city also publishes a weekly online water report about the condition of the city's public wells, consumption, demand, and reservoir levels.<sup>247</sup>

Recently, Santa Fe declared a "Stage 3 Drought Emergency" that increased water restrictions, including prohibiting car washing at residences and restricting washes to once a month at commercial car washes; limiting outdoor watering to one irrigation per week; prohibiting the planting of new grass

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<sup>243</sup> John R. Brown, "Whisky's fer Drinkin'; Water's fer Fightin'!" *Is It? Resolving a Collective Action Dilemma in New Mexico*, 43 NAT. RESOURCES J. 185, 197-98 (2003).

<sup>244</sup> *Id.*

<sup>245</sup> *Id.* at 198 (footnote omitted).

<sup>246</sup> *Id.*

<sup>247</sup> Lucero & Tarlock, *supra* note 224, at 824.

seed; and requiring that swimming pools be covered when not in use.<sup>248</sup> Similarly, "Albuquerque is also moving to consider direct ties between water supply and growth" by forming "[t]he New Mexico Public Interest Group . . . [that, among others, has] asked public officials to consider a conservation ordinance that includes a water budget to tie new developments to wet (as opposed to paper) water supplies."<sup>249</sup> "[T]he New Mexico Subdivision Act of 1978 requires land developers to demonstrate an adequate water supply prior to subdivision approval."<sup>250</sup> In addition, "the Planned Growth Strategy . . . requires the city to step into the driver's seat and provide incentives and inducements to encourage the public sector to build where it is most efficient and fiscally-prudent for the community to serve" the water needs of the new development.<sup>251</sup>

#### *D. Beneficial Use and Prior Appropriation*

The New Mexico Constitution requires that "[b]eneficial use shall be the basis, the measure and the limit of the right to the use of water."<sup>252</sup> In New Mexico, as in other Western states, "it is only by the application of the water to a beneficial use that the perfected right to the use is acquired," and consequently, "an appropriator can only acquire a perfected right to so much water as he applies to a beneficial use."<sup>253</sup>

"The rule . . . rewarded persons who put water to 'beneficial use,' by giving them a protectable property right . . . . [T]he majority of western state constitutions embody this principle."<sup>254</sup>

The words "basis," "measure," and "limit," each of which is used in New Mexico's Constitution, have different meanings or they would not all have been included in the same sentence. A simple interpretation of their meanings is that (1) one can only acquire a property right in water if he "bases" that right on the beneficial use of water, (2) the size of the right is to be "measured" by the

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<sup>248</sup> *Id.*

<sup>249</sup> *Id.* at 824-25 (citation omitted).

<sup>250</sup> Coulson, *supra* note 212, at 15; see N.M. STAT. ANN. § 47-6-11 (West 2007).

<sup>251</sup> Lucero & Tarlock, *supra* note 224, at 825 (internal citation omitted); see N.M. STAT. ANN. § 72-14-3.2 (West 2007).

<sup>252</sup> Martha E. Mulvany, State ex rel. Martinez v. City of Las Vegas: *The Misuse of History and Precedent in the Abolition of the Pueblo Water Rights Doctrine in New Mexico*, 45 NAT. RESOURCES J. 1089, 1096-97 (2005) (citing N.M. CONST. art. XVI, § 3).

<sup>253</sup> *Id.* at 1096 (citing State ex rel. Martinez v. City of Las Vegas, 89 P.3d 47, 58 (N.M. 2004) and State ex rel. Cmty. Ditches v. Tularosa Cmty. Ditch, 143 P. 207, 213 (N.M. 1914)).

<sup>254</sup> Charles T. Dumars, *Changing Interpretations of New Mexico's Constitutional Provisions Allocating Water Resources: Integrating Private Property Rights and Public Values*, 26 N.M. L. REV. 367, 368 (1996) (quoting State ex rel. Martinez v. McDermott, 901 P.2d 745, 743 (N.M. Ct. App. 1995)) (footnote omitted).

quantity beneficially used, and (3) the right will be "limited" if one fails to beneficially use it—the right is subject to loss for non-productive use and is, therefore, conditionally limited . . . .<sup>255</sup>

Despite a trend toward private water rights and capitol improvement,

the Constitution of New Mexico declares that the *unappropriated* waters of the state "belong to the public." This expression of public ownership has been construed to mean that the members of the public have the right to appropriate water for their private use, but it has also been construed to vest the state with ownership of the resource. . . .

....  
[W]ater rights available to the public are "subject to [prior] appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right."<sup>256</sup>

"These provisions have been described as placing water in a unique" status "because '[the] entire state has only enough water to supply its most urgent needs. Water conservation and preservation is of utmost importance and its utilization for maximum benefits is a requirement second to none, not only for progress, but for survival.'"<sup>257</sup> Furthermore, "[e]ven though the New Mexico Constitution does not mention groundwater, New Mexico's traditions, political needs, and exigent circumstances have also made groundwater subject to the prior appropriation doctrine."<sup>258</sup>

Despite the passage of eighty-six years since the New Mexico Constitution was drafted,

the fundamental principles of conservation—full utilization for the benefit of the public and prior appropriation—have remained constant. Throughout this period, New Mexico has never attempted a formal definition of beneficial use. Therefore, any use which is not wasteful has been accepted. The term "beneficial use" provides the flexibility necessary to meet the needs of a changing society.<sup>259</sup>

## IX. CONCLUSION

As the experiences of other states with water concerns clearly demonstrate, it is unnecessary—and disruptive to sound land use planning—for water issues to dominate all else in making decisions about the appropriate use of

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<sup>255</sup> *Id.* at 368-69 (citing N.M. CONST. art. XVI, § 3 and N.M. STAT. ANN. § 72-12-8 (Repl. Pamp. 1985 & Supp. 1995) (forfeiture of water rights for nonuse)).

<sup>256</sup> *Id.* at 368 (quoting N.M. CONST. art. XVI, § 2) (emphasis added) (footnote omitted).

<sup>257</sup> *Id.* (quoting *Kaiser Steel Corp. v. W.S. Ranch Co.*, 467 P.2d 986, 989 (N.M. 1970)) (alteration in original).

<sup>258</sup> *Id.* (citing *United States v. New Mexico*, 438 U.S. 696 (1978)).

<sup>259</sup> *Id.* at 369 (citing N.M. STAT. ANN. § 72-41-9 (Repl. Pamp. 1985 & Supp. 1995)).

land. It is one thing to be environmentally sensitive about such uses and to take special care of an important—indeed, critical—natural resource such as water. It is altogether something else to elevate water to a position before which all other considerations must bow. This is what Hawai‘i’s State Supreme Court has done, without regard for the painstaking, lengthy policy deliberations which resulted in the comprehensive Water Code. The court ignored both the intent and the letter of the Water Code and instead actively and mistakenly seized upon a common law doctrine—the public trust—to redefine and virtually eliminate most private rights in water and its allocation.<sup>260</sup> In the process, the court may have saddled the state and its citizens with a broad definition of public trust that will come back to haunt the state, its citizens, and its public and private planners for decades.

What should the court (and the Commission) have done? First, the court should have explicitly recognized (and confined its holdings within) the carefully and clearly crafted and prioritized public purpose limits in the water code. Those purposes clearly provide for the primacy of commercial and economic use of water. Protection of the environment, conservation and native Hawaiian practices comes second. Whether this is in fact the appropriate ordering of priorities is not the point. That is the way the Hawai‘i State Legislature wrote the statute. Second, the court should have restored county general and development plans to the place and priority required by the Water Code. The relevant statutory language provides for water plans to conform to state and county plans and zoning. The Commission reversed this priority and elevated water plans and allocation decisions over state and county plans. The Court barely mentioned the issue. Whether county general and development plans and state plans should take precedence over state water plans and allocations is, again, beside the point. That is the way the

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<sup>260</sup> See George P. Smith, II & Michael W. Sweeney, *The Public Trust Doctrine and Natural Law: Emanations Within a Penumbra*, 33 B.C. ENVTL. AFF. L. REV. 307 (2006).

Judicial activism has the effect of preempting a full and balanced discourse both to test and to shape society’s relationship with the natural environment. Instead of continuing to broaden the base of judicial latitude for intervening, and thereby second-guessing the administrative decisionmaking process, technically incompetent courts should despise efforts to make themselves balancing artists that are intent on finding balancing points of environmental protection with competing societal values. . . .

Expansion of the public trust doctrine for no other reason than to protect the environment simply ignores the economic precedent established by the original doctrine itself. . . . As this Article has discussed, the most principled approach to advancing the common good is balancing the legitimate economic interests of individual property owners against public resource preservation. When this is executed, rarely can it be shown that the benefits of resource preservation outweigh the economic concerns of property owners. Thus, any expansion of the doctrine should be slow and scrutinized to the highest degree and with a spirit of judicial restraint.

*Id.* at 342-43 (footnotes and citations omitted).

Legislature wrote the Water Code. Third, the court should not have invoked public trust principles in its decision and certainly should not have adopted such a broad definition of the public trust. Public trust doctrines have no place in water rights decision-making where a state has a modern and comprehensive water code dealing explicitly with water allocation, planning and public use and purpose. The experiences in other states with water resource issues, like Arizona, Colorado, and New Mexico, clearly demonstrate that another path, based largely on statute and common law without undue reliance on the public trust doctrine, is possible and effective.

The consequence of ignoring these three points was to: (1) elevate preservation and native Hawaiian rights over the commercial and economic use of water; (2) minimize such economic and commercial uses of water on the Leeward side of Oahu, where county plans had determined that growth and development should occur, in favor of preserving minimum stream flows on the Windward side, which county plans had determined should remain undeveloped; and (3) radically expand the public trust doctrine, which in turn reduces, nearly to the point of extinction, private, commercial, and economic rights in water and its use. Whither legislative deference?

## ADDENDUM

In an opinion filed as this article went to press—*In re Water Use Permit Application (Kukui (Molokai), Inc.)*<sup>261</sup>—the court continued to overstate both the place of the public trust doctrine in disputes governed by statute and the preeminence of native Hawaiian rights in water allocation matters. First, the court continues pell-mell down the path that it unaccountably took in *Waiahole* by elevating the default common law doctrine of public trust over the clearly articulated purposes set out by our state legislature in the state Water Code. Indeed, in the court's words, the public trust doctrine "permeate[s] the State Water Code."<sup>262</sup> Whatever unarticulated ideas may pass through the hidden interstices of the Water Code, the plain and unambiguous text of the Code, as set out earlier in this article, clearly places commercially economic uses of water in a superior position over native Hawaiian and conservation rights and uses.<sup>263</sup>

Second, the court continued to read that part of the state constitution providing for native Hawaiian rights in absolute and unregulated terms, despite language in the provision that clearly and unequivocally gives the legislature the authority to regulate those rights. To the extent that the state Water Code expresses a clear preference for commercial economic uses over native Hawaiian uses—as it certainly does—the legislature has in fact constitutionally exercised that regulatory authority. The court's decision in this case in effect reads that provision out of the state constitution.

Finally, the court confirmed that correlative rights have been read out of Hawai'i law. Defending its water allocations, the Commission argued that "this court continues to recognize the correlative rights rule articulated in *City Mill Co. v. Honolulu Sewer & Water Commission*."<sup>264</sup> The Hawai'i Supreme

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<sup>261</sup> (*In re KMI*), 116 Hawai'i 481, 174 P.3d 320 (2007).

<sup>262</sup> *Id.* at 490, 174 P.3d at 329.

<sup>263</sup> To take a simple but revealing example, the Court correctly recounted that the Water Code defines "reasonable beneficial use" as a "use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and public interest." *Id.* at 490, 174 P.3d at 329 (quoting HAW. REV. STAT. § 174C-3 (1993)) (emphasis removed). But the court's analysis emphasized the word "necessary," both literally and practically, to the exclusion of the rest of the definition. The Code does not require proposed uses that are "necessary" in the abstract sense or necessary according to the court's order of priorities. The Code authorizes uses in "such a quantity as is necessary for *economic and efficient* utilization, for a purpose, and in a manner which is both reasonable and *consistent with the state and county land use plans and the public interest*." HAW. REV. STAT. § 174C-3 (1993) (emphasis added). A statutory text cannot be given its "plain and obvious meaning" unless the text is read in context. See *In re KMI*, 116 Hawai'i at 489, 174 P.3d at 328.

<sup>264</sup> *In re KMI*, 116 Hawai'i at 503, 174 P.3d at 342.

Court quickly dismissed the idea that there is anything left of correlative rights. According to the court, because “the *entire* island of Moloka[i] has been designated a [water management area], the common law doctrine of correlative rights is inapplicable to the present matter.”<sup>265</sup> Instead, the transport of water by overlying owners is contingent on their “satisfaction of the statutory requirements enumerated” in the State Water Code.<sup>266</sup>

Yet again, whither legislative deference? Whither property rights and constitutional protections?

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<sup>265</sup> *Id.* (quoting *In re Waiola O Molokai, Inc.*, 103 Hawai'i 401, 447, 83 P.3d 664, 711 (2004)) (emphasis added).

<sup>266</sup> *Id.*